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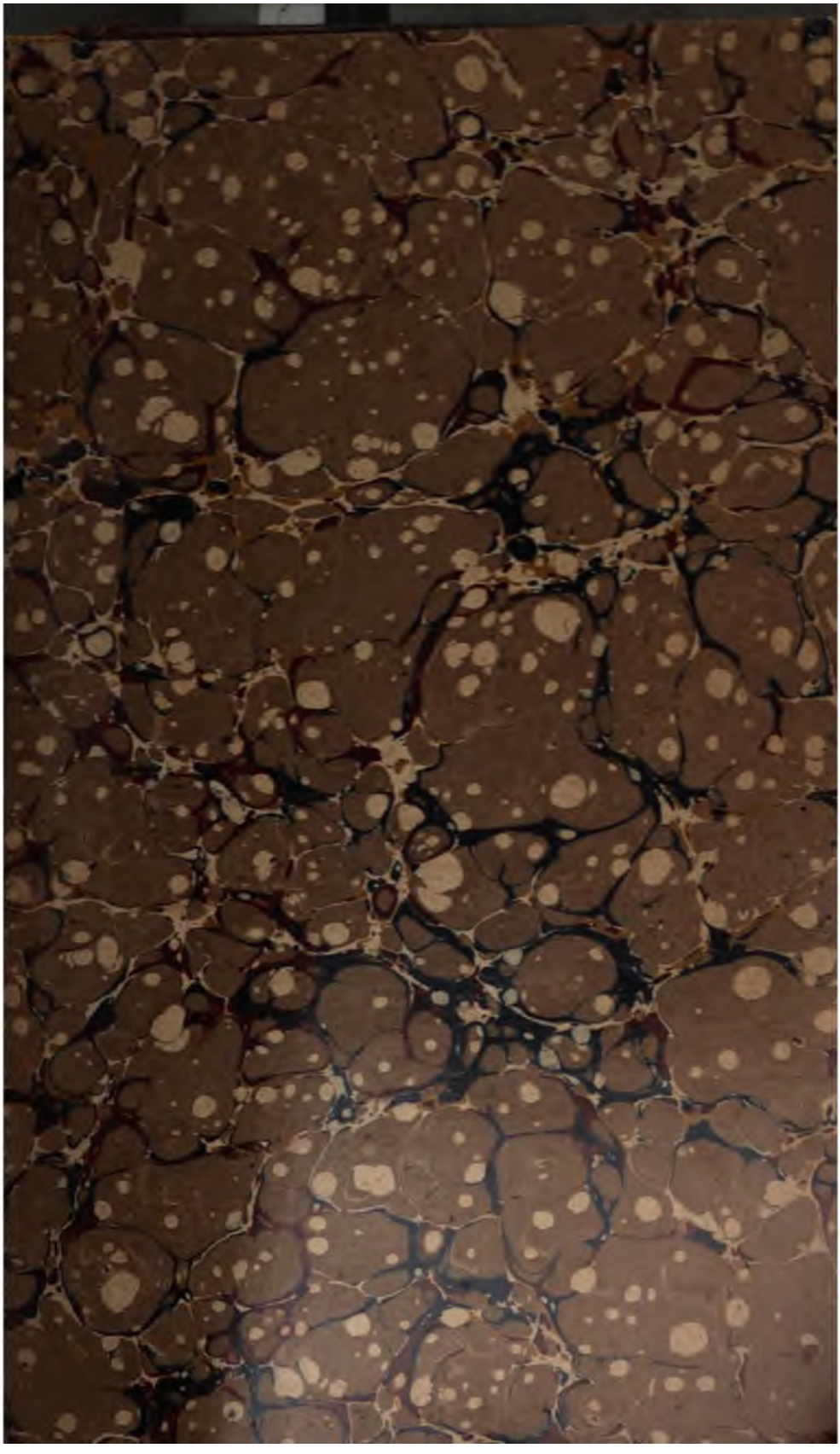

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SOUTHERN EDUCATIONAL REVIEW

EDITED BY
H. ELMER BIERLY

Feb.-Mar., 1907

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SOUTHERN
EDUCATIONAL REVIEW

FEBRUARY-MARCH, 1907

In What Definite Ways May the State Department of Education Further the Establishment of a System of Public High Schools?

By ELMER ELLSWORTH BROWN,
Commissioner of Education of the United States.

It is fast coming to be a fixed characteristic of American education, that it seeks to avoid every sort of cul de sac and to organize the public schools into one coherent system. Every lower public school is to lead to some higher public school; every higher public school is to be approached directly and immediately through some lower public school; and every middle school is to have rights and responsibilities with reference to schools above and below.

This characteristic is one that strikes the attention of our visitors from abroad. A member of the Royal Prussian Commission, which visited this country in 1904 to study American education with particular reference to its bearing upon industrial development, reported as follows to his home government:

"The new American school is a public school, i. e., a school established by the people, maintained by the people, conducted by the people, and open to the people without payment of tuition fees. It comprises (1) the kindergarten, from the fourth to the sixth year of age; (2) the elementary school (grammar school, primary school), with an eight-year course; (3) the middle school (high school), with a four-year course; (4) the college, with a four-year course; (5) the university.

"None of the schools from (1) to (4) represent a blind alley, but each is meant to prepare for the next higher grade, in accord-

ance with the words of Huxley, much quoted in America, that 'no system of public education deserves the name of a national system if it does not raise a great educational ladder which leads from the gutter to the university.'"

So Ambassador Reid, in his address on American education, delivered at Dundee, Scotland, on the second of this month, declared that "the doctrine is rapidly gaining ground in most of the States that it (public education) should be carried at the public expense from the primary branches straight through the secondary schools and on to the universities, for all who are found capable, able, and desirous to continue such a course. * * * A distinctive feature of the American system is the secondary school. In countries where free tuition is not carried up to the university, there is apt to be a vague, undeveloped territory between the primary schools and the universities, filled sometimes and to a certain extent by tax-supported high schools, but more frequently by private high schools. The distinguishing feature of the free common school system of the United States is the completeness with which it fills this gap between the primary school and the colleges or universities."

The right of the secondary school to this place in American public school systems has indeed been questioned, but whenever the question has been carried into the higher courts it has been settled in favor of the American principle, that public education is to be limited only by the power and willingness of the public to pay for it. The latest case involving the fundamental question as to the place of the high school in a public school system was that decided by the Supreme Court of Kansas in an opinion handed down on the first day of December, 1904. This case went further than the much quoted Kalamazoo case in Michigan in the early seventies, and the Illinois case of Powell *et al.*, versus the Board of Education; for in the Kansas case, that of the Board of Education of the City of Lawrence versus Dick *et al.*, the question involved was that of the right of the Legislature of Kansas to authorize a local Board of Education to pay a part of the expense of the maintenance of a high school by a regular charge for tuition. The Court decided that the act of the Legislature authorizing the collection of such tuition fees was unconstitutional, or in general terms, that the high school in Kansas must be a free school.

Referring directly to the topic which I am asked to discuss, *In what definite ways may the State Department of Education further the establishment of a system of public high schools,* I beg to say that the making of public sentiment in favor of high schools and

the shaping of legislation for the establishment and maintenance of such schools seem, in the most general terms, to be the two ways in which the State Department of Education may discharge its responsibility in this matter; and these two ways are joined together in one, for the laws depend upon public sentiment for their enactment and enforcement, and one of the best things that comes from any good law when it is carried into execution is the making of more public sentiment in favor of that good thing which the law represents.

You of the South will not expect me to tell you how to make public sentiment in this matter. The glimpses which I have caught of the great campaign of education which you are carrying on at this present time are enough to make me feel a great humility when it comes to offering you advice. Nobody who has seen any part of this campaign can fail of the conviction that it is one of the notable and significant facts in our current educational history. In this powerful movement I can only, from the depth of my heart, bid you God-speed.

And what shall be said as regards the shaping of high school legislation? I am not unmindful of the fact that legislation is the work of legislatures, yet it is doubtless true in the South as in other sections of our country, that legislation in matters educational is largely influenced by the educational leaders of the several States, by the State Departments of Education, the State Universities and Normal Schools, and other institutions and individuals whose part in this matter is educational and not political. It is a matter for profound congratulation, that education with us is a political matter in the larger sense and not in the narrower, partisan sense, and that politicians of all parties may be found working effectively with schoolmen who know but little of practical politics, in the one common American endeavor to improve the schools.

At this point there is hardly anything more to be desired by those who are working for improvements in our systems of education than a wide knowledge of what is actually doing in the foremost educational States of our Union. The trophies of Miltiades would not let the young Themistocles rest. And the work of Horace Mann in Massachusetts, the comprehensive organization of the University of the State of New York, and the democratic ideals of Thomas Jefferson, culminating in the University of Virginia, have furnished the sting of emulation and the allurement to high achievement in every other American State, a sting and an allurement which have been felt, as we are told, even in the old and the

new civilizations beyond the seas. Just now the State Departments of Education in the several States can not do better by way of furthering the establishment of the efficient systems of public high schools than to become informed and spread abroad the information with reference to what is doing in neighboring States.

It has been my fortune to be concerned of late in the preparation of two publications which have for their object the bringing together of information which may be of use to this end. I think I may venture to refer to these publications at this point. The first relates exclusively to schools of the high school grade. It is a pamphlet of 150 pages, entitled, *State aid to secondary schools.* It was prepared under my direction by David Rhys Jones, and was published in December, 1903, in the series of Publications in Education of the University of California.

This publication, based upon an exhaustive study of original documents, gives a practically complete summary of the provision in the several States for general State aid to schools of secondary grade from the earliest colonial times to the beginning of the twentieth century. It is of especial value for practical purposes in that portion which presents a summary of State appropriations for local high schools, and the system of administration of such appropriations, within recent years, in the States which at the time of its publication had taken most advanced ground in this matter and furnished the best models for imitation and criticism, particularly the States of Maine, Massachusetts, New York, Maryland, Wisconsin and Minnesota. The history of the beginnings of the modern movement in these several States, going back to the year 1864 in New York, 1865 in Maryland, 1873 in Maine, 1875 in Wisconsin, and 1878 in Minnesota, is full of suggestions for the States which have made their beginnings at a later period; and the various forms of State aid and State administration, which have appeared under the variety of conditions presented in widely different commonwealths, is an indication of the wonderful versatility and adaptability of American educational practice. The lesson which one learns from this history is that every State must do its own work in its own way, and the encouragement which it offers is that the spirit of American education may fulfill itself in many ways, no one good custom being permitted to corrupt our educational world.

It is the misfortune of every publication which is useful because of its timeliness, that it no sooner appears than it begins to grow old. In the monograph to which I have referred, Mr. Jones took

the utmost pains to present the latest information with reference to enactments in the most favored States, but already those States have surpassed themselves in this movement, and other States have taken steps of great significance and suggestiveness. The second publication to which I have referred will, in some measure, remedy this defect in the other, for at least a few days to come, until it too shall have become antiquated through the progressive work of our Legislatures and State Departments of Education. It is a bulletin of the Bureau of Education, now in press, prepared by Professor Edward C. Elliott of the University of Wisconsin, and entitled *State school systems: Legislation and judicial decisions relating to public education, October* 1, 1904, *to October* 1, 1906. This publication is intended expressly to provide the Executive and Legislative authorities of the several States with a reliable index to recent State enactments relating to education in all of its various forms, to secondary education among the rest. Through the courteous co-operation of the Secretary of the Interior and the Public Printer, the issuance of this bulletin is to be hastened so far as the facilities of the Public Printing Office will permit, and I am extremely hopeful that it will appear in time for use by the forty State Legislatures which convene on or soon after the first day of January, 1907.

In the two years to which this publication relates, at least twelve States have adopted new legislation with reference to high schools, and some of this legislation is of far-reaching significance. Georgia has provided for industrial and agricultural schools in the several Congressional districts of the States, to be branches of the State College of Agriculture, a department of the University of Georgia. Indiana has distinctly authorized the acceptance of gifts for county high schools, in value not exceeding thirty thousand dollars. (It is worthy of note that private benefaction has begun to turn in some measure in the direction of supplementing the bounty of the State in the support of public educational institutions.) Kansas has increased the length of the course of study in county high schools from three years to four, and has made other liberal provisions. New Hampshire has made a legal definition of a high school or academy, and has required towns in which there is a high school to raise and appropriate this year sufficient money properly to maintain such school. North Carolina had adopted its law of March 6, 1905, providing for special elections for a special tax of from one to three mills, and making regulations governing the course of study. Pennsylvania has extended opportunities for high

school education to children residing in school districts having no public high schools, and has appropriated two hundred thousand dollars for the support of township high schools during the years 1905 to 1907. Vermont has required the establishment of high schools in all towns of the State, or other provision for high school instruction, and has voted special State aid for payments for tuition of pupils residing in towns of less than two thousand population. Virginia has passed the important act approved March 14, 1906, relating to the establishment of high schools, with State aid, under the general supervision of the State Board of Education. Wyoming has provided for the establishment and maintenance of free high schools. Such examples as these, even though the precedents of one State can not be strictly followed in another, are highly suggestive and stimulating for all of the States.

On the basis of such publications as those I have mentioned, and in the light of the generation-long experience in the administration of State systems of high schools which they represent, we are able to block out some very broad lines or procedure in this matter, always remembering that the system of any State must be a unique thing, a new creation, finding in its local individuality much of its efficient force for the work in hand. I will only venture to suggest in the most general way three things which State Departments of Education may do to further the ends you have in view.

In the first place it is necessary to keep before the people this great and growing purpose of American education, that it shall be in all of its grades an education for all, and shall be so organized that every man shall find encouragement and opportunity to pass up freely from grade to grade so far as his abilities and his prospective usefulness to society shall determine. As regards the high school, it is desirable that it shall be a thoroughly sound link between the elementary school and the college. One great advantage of our American system is that every high school is exerting a constant pull upward on all of the lower schools. The high schools are of more value to the lower schools than the money which they cost would be, if it were distributed to the lower schools and the high schools wiped out of existence. The high schools must continually be drawing the elementary schools upward to higher attainments. The colleges and universities must continually draw the high schools upward to higher attainments. I am well aware of the dangers of this situation. It calls for the exercise of the utmost patience on the part of both the higher and lower schools.

They must seek to understand one another and must not be unreasonable in their demands one upon another, but the upward drawing must never be lost. In the high schools particularly we shall have, as we have had, a long continued discussion of the apparently conflicting aims of the courses which prepare for college and the courses which prepare for life without preparing for college. It is through these very discussions that our high schools have come into that fine self-consciousness which has enabled them in recent years to influence the whole educational situation, instead of being simply and blindly subject to the demands of the colleges on the one hand, or to the demands of local interest and prejudice on the other hand. Let this discussion go on and work itself out in the better fulfillment of our American ideals, and let us not forget that in the establishment of our high schools we are continually setting up anew that educational ladder which shall indeed reach from every school district in the land up to the highest ranges of university life.

My first suggestion is, then, in effect, that high schools should be established with a well-organized secondary course of study. In the second place it seems clear that we are to attain the best things in our high school organization by combining State support with local support. It is not so important that the State should give a large proportion of the money expended by the high schools as it is that it should give something. The chief advantage in State appropriations for schools is that they encourage and stimulate local taxation. A fairly substantial State appropriation or State tax for secondary schools, fairly distributed throughout the State, will give that hope and stimulus to local schools struggling against local indifference and local parsimony, and will help mightily to win the victory for adequate local appropriations for schools of this grade. The State appropriation, moreover, gives added and obvious reason for the moderate amount of State supervision which is desirable in so important an element of the public educational system. When State funds lend encouragement to district and county initiative, and State inspection of the schools gives wise guidance and healthful stimulation, we may hope for such a development of secondary education as was hardly dreamed of in earlier days.

In the third place, State Departments of Education should by all means in their power protect the public from that educational gold-brick, a high school taught by teachers of primary-school grade. It is of the utmost importance that high standards be set

and maintained in the teaching force of these schools. The American high school can not do its work if it be simply a higher elementary school. In the high school the pupils should meet with ideals and with examples of scholastic efficiency of distinctly a higher grade than can generally be found in the lower schools. The larger view of civilization must find its personal entrance into these schools. The pupils must there discover examples of the thoroughly trained mind, the scientific spirit, the enlightenment which comes from wide and accurate knowledge, the touch with the great world of the university and the larger life of our time, which shall meet and satisfy the wakening soul of youth, or waken the higher aspirations which have not yet come to consciousness.

I have tried to stick to the text you have set for me. I have tried to suggest the importance of so directing our new movements in secondary education as to secure (1) a better organization of the course of study, (2) better support, and (3) the best possible teaching force; and of making these schools contribute, by such means, what they have to contribute to the higher life of our communities. I have suggested, furthermore, as a means to this end, the wide diffusion of such information as may be available regarding the best of current movements in other parts of our land and of the world. Through such means as these and through other means which others shall suggest, I hope that this great and promising movement in the development of secondary education in the Southern States may be greatly furthered and encouraged as a result of this gathering.

The Relation of the University to the High Schools.

By President D. F. Houston, University of Texas.

Superintendent Martin said this morning that most of the universities in the South are old bachelors, that the primary schools are the maidens, and that it is his function to try to marry the two. If he were in Texas, he would be without a job. The University of Texas has never had the misfortune to be a bachelor. It was organized by University of Virginia influences, but the spirit of the West was soon infused into it, and it was re-organized on its present basis.

Since the beginning of the movement to separate Texas from Mexico, there has been just one conception of education, and that

is that it is a unit from the first grade of the humblest rural school, to the university. There is no law anywhere to the effect that the University of Texas is the head of the common school system; but everybody believes that it is. The fact is recognized. The relation, therefore, of the University and the high school is the relation of parts to each other. We recognize that we could not have one without the other. A high school that does not keep the University in mind certainly would not be an efficient or inspiring instrument; the university would be impossible without the high school.

In too many instances, institutions have exhausted their efforts to influence secondary schools simply by examining applicants who present themselves at the doors of the university, or by sending out examination questions, which perhaps have served as models for some teachers, but have had no effect on students. I believe that the only way for the university to vitally affect the high school is to get right down into it and become a part of it. It must make not only the teachers, but also the trustees and the people of the community, as well as the pupils, feel that they are a part of the university; and it must compel its faculty and students to feel that they are a part of the school system, a part not only of the high school, but also of the secondary schools, of the elementary schools, and even of the private schools and colleges.

During the discussion this morning by the State Superintendents of Education of the question of standardizing and grading public schools, I was impressed with the fact that nothing was said about the duty of the State University to take a vigorous part in stimulating the activities of the people along educational lines. Our universities have contended that the stimulus must come from above, and have let the matter drop there. They have assumed the existence of a secondary school system, and have thought too little about the establishment of close and cordial relations between the University and this system. In considering how to establish closer relations between the University and the high school, our attention at once centers on three features of fundamental importance, i. e., the requirements for admission to the University, the course of study of the high school and the course of study of the university. Now, in my judgment, the faculty of the high school has just as much right to dictate the course of study of the university, as the faculty of the university has to dictate the course of study of the high school. But this has not generally been accepted, and the faculty of the university has dictated the program of the high

schools without so much as asking the high school principals for an expression of their views. Both are affected by the decision, and both are interested in the outcome, and both should be in the conference which reaches the conclusion. The university, by asking the advice of the secondary school men will not only win their confidence and sympathetic co-operation, but will also receive much light and wise advice from them. All the wisdom about courses of study and admission requirements is not monopolized by the colleges. At present the college men and the secondary school men appear to differ about many things. The difference is largely only apparent; it is not real. A conference will develop this. Many school men contend that they must arrange their courses so as to prepare for life, and not for the college. This view involves a contradiction. It rests upon the assumption that the university or college does not prepare for life. Its mission in this direction is the same as that of the secondary school. If any college course does not prepare for life, the faculty had better take speedy action and change it. A high school course that prepares a student for life should prepare him for college, and a course that prepares him for college should fit him for life. The secondary school course should be left open, especially at the top.

In trying to establish this close relation, the university must start from where it is. It cannot get up in the air and ask the high school to come up. It must come down to the level of the high school and base its course upon that of the high school, then constantly, steadily, and sympathetically draw it up higher. For many years, the University of Texas has had a system of affiliation and a system of visitation. It has called upon those members of its faculty who have most experience and could mingle easily with teachers and understand their perplexities, to go out to the schools, acquaint themselves with their course of study and equipment and see whether or not it would be possible to accept students without an examination. No school, in the beginning, was visited, unless a request came from that school that the University send a visitor. The situation is such now that schools that can make a reasonable showing urge the visitor to visit them. We now have about 129 affiliated schools, and there are on the list of the visitor many others applying for affiliation. Letters come from these schools in about these terms: We have students who do not want to take examinations. We would like to secure affiliation. Can you not send a school visitor to us? If the principal does not write, the parents write; and if they do not write, the boy writes that he

does not want to take an examination. Out of an enrollment in the freshman class of between 450 and 500, 50 appeared for examination and 20 were rejected, so that 30 were admitted to the University on examination. And I want to say, from long experience, that the students who enter on examination are not, as a rule, as well prepared to do the University work as the students who enter from the schools. The University has not failed to reject a school, or to eliminate from its affiliated lists schools that were not doing their work satisfactorily. Sometimes it has eliminated particular subjects, sometimes it has dropped the school entirely. Then you see a fight to get it back, and sometimes that fight takes the shape of voting more taxes for securing better teachers or to pay higher salaries, etc. As I have said, there are many schools in the State now seeking affiliation with the University. This involves careful consideration of their equipment, their teaching force and course of study. The visitor confers not only with the superintendents and principals, but also with the trustees and with other people in the community interested in education. It becomes a very practical matter. He tells them that they have not enough teachers, and that they must secure additional teachers, or better teachers; and where they are teaching science, that they are teaching it improperly and that the University cannot recognize it. This is a matter of every day occurrence. Our first Visitor of Schools was one of the best school men I ever knew. We paid him $3,000 to get him. The second will be equally efficient. We have had to pay a considerable sum to get him because practically all his time every day for nearly eleven months in the year is given to this work, and we do not hesitate to give him any clerical force he needs. When the Visitor of Schools is not on his rounds, his time is taken up with a vast correspondence, with the shaping of courses of study, arranging for conferences and for visits. We supplement this officer's work with the work of the three professors in the department of education and other men who can do this kind of visiting satisfactorily. We do this for two reasons: First, because teachers in the high schools like occasionally to come in contact with the professors in the university, who are specialists in particular subjects, and second, it does the professors a great amount of good to see the conditions in the schools. He does his work better, and the week he loses from his college work is not to be considered, when you consider the benefit to him of the visits.

The relation must be further strengthened by provision in the University for professional training as well as for training in

subject matter for teachers of high schools. We have three normal schools in Texas, but they do not aim directly to train teachers, except for the grammar and elementary grades. They have left it, for the most part, to the University to provide for the training of teachers for the high school and for the colleges of the State. Many of the high school subjects are taught by teachers from high and normal schools. Of course, we cannot supply the demand. We have not enough of the right kind of men, and will not have until we pay more. I do not think the state departments of education can help the cause of education in any state more than by arousing public sentiment to a recognition of the fact that we need better men in the teaching business. Most of the strong men get into other professions.

There are certain minor things that the University may do to strengthen its relations with the schools. It may issue bulletins and send them free to the schools, suggesting courses of study, after having conferred with the superintendents and principals as to what the programs should be, giving accurate and definite suggestions as to the methods of teaching and as to equipment, as to organization of schools, as to plans for school buildings, as to school equipment, consolidation of schools, etc. Further, it may make the affiliated schools the centers for examinations for students who may desire to enter the University. The University will conduct a summer session for high school teachers who cannot go to school during the regular session. I know that it is said that it is too hot to have summer sessions in the South. But we have had a summer session in even Texas for a number of years. Last year we had 601 attending the summer session, mostly teachers, part of them taking professional courses, part taking the regular university course, which course covers as much ground as the same course covers in the University during the regular term. The faculty of the University must attend the teachers' conventions. Our Visitor of Schools is the chairman of the high school section of the State Teachers' Association. The University may do a wise thing by offering scholarships in the University for the honor graduate of each affiliated school. I believe that the high quality of our student body is due, in some measure, to the fact that we have been offering free scholarships to honor graduates and receiving a great number of these into the University.

The University Visitor of Schools is not a drummer for the University. He is a promoter of educational arrangements and seeks to build up the system from top to bottom, and works as much

for the private schools of the State as he does for the university. The private institutions have come to recognize this, and a number of them have requested him to let them have the facts in full which he collects. Furthermore, we find it an excellent thing to keep in touch with the teaching force of the schools and have the visitor furnished with the name of every student in the University from the school he inspects. We are seeking more and more to have a full attendance of the superintendents and principals of the affiliated schools and all others that will come, at the meeting of the conference of superintendents and principals with the faculty of the University. We are trying to develop an annual conference of the county superintendents of education and with any of the rural school officials that may care to attend. The University is trying earnestly to let the people of Texas see that it is just as much concerned with the upbuilding of the rural schools as it is with the upbuilding of the high schools, from which it immediately draws its patronage. I think, if the time has not already come, it will rapidly come, when the rural people will realize that the University is one of their best friends.

The Relation of the Higher Institutions to the Secondary Schools.

JOSEPH S. STEWART, University of Georgia.

One of the greatest and most urgent problems for our educators of the South to solve is to secure a just interrelation and correlation of all our educational forces, public and private, grammar school, high school and colleges, so that from unity of action there will be as little over-lapping of work and wasted energy as possible and the greatest good to all.

We believe the time has come for all our college authorities to look upon the high schools, not from the viewpoint of the demands for entrance alone, but to secure the best possible training for all students at that period of life and study. The high school curriculum must be developed as an end in itself, to give the maximum amount of mental vigor, culture and skill to its students and the colleges must then adjust their requirements to meet the needs of these graduates.

The whole theory of the relation of college to secondary school is shifting from the iron-clad requirements of each college, often imposed arbitrarily to meet the convenience of the head of some

department in adjusting his course to a comprehensive study on the part of the educators of high school problems and definite plans developing secondary schools and a similar study of college entrance requirements so as to adjust these to the needs of the schools and their students.

The report of the Committee of Ten was the first comprehensive study of the high school curriculum and marks an epoch in the development of a clear union of secondary schools and colleges.

The development of the accrediting system in the middle West has been the greatest contribution to the development of our high schools through the help from university influence. The Mosely Commission considered this the greatest contribution of America to educational organization.

The Southern Association of Colleges and Preparatory Schools has done much to raise standards; but its work is confined to a few select institutions and a few select preparatory schools. It has not reached the great body of our secondary schools. With the establishment of the chair of Secondary Education, first in Georgia and later in six other state Universities, has begun a new era in high school development in the South.

While President of the North Georgia Agricultural College I became impressed with the lack of system in our secondary schools and began a study of the high schools of other counties. I compared the recent examination system of New York with the accrediting system of the Middle West and our own lack of any system. I became so impressed with the wonderful results of the latter system that I resigned my position to undertake the introduction of a similar system throughout the South. For two years I carried on the work with the help of Mr. George Foster Peabody and the University. The General Education Board then extended aid to us and to six other states.

The longer I work in this field, the more I realize the importance of the movement. The Professor of Secondary Education becomes a kind of nexus between the higher institutions and the secondary grammar grades.

The work at once brings the University and other higher institutions into intimate relation with the department of State Education, the extent to be determined largely by the organic relation of the high schools to the State department. In all cases the University must work for thorough courses in the grades and normal preparation for the high schools. This is accomplished

(a) By lending all the influence of the institution and its alumni

in securing a local tax for school purposes, and in carrying out the plans of the department for the enrichment of the schools.

(b) By using its influence in securing needed legislation.

(c) By preparing skilled superintendents.

(d) By instruction of teachers in the summer schools.

(e) By bulletins of information from its several departments on school architecture, school gardens, libraries, nature study, etc.

(f) By assisting in arranging the courses of study and teacher's Hand-book.

(g) By members of Faculty attending teachers' Institutes and educational meetings and by holding conference at the University.

(h) By preparing teachers for the high schools.

(a) By campaigning with the state superintendent in favor of education.

II. The University realizes the need of teachers properly trained to take charge of the several departments in the improved high schools and constant demands are made upon the institutions for trained teachers. As a result courses of study must be arranged in our Universities for the preparation of secondary teachers. Last June we graduated six young men in this department and all secured departmental places in some of our best high schools. We could have used forty more as easily.

We cannot, in this short paper, go into details concerning this course, but it should be a full four-year degree course with the fullest election of the work in the University allowed, to secure the best preparation for each student in the departments he may select to specialize as a teacher, at the same time securing a well bottomed development. The establishment of these courses is imperative and acts to the benefit of the schools and reacts beneficially in the institution. Here is an immediate demand for aid from the Peabody and General Education Board. The states will come to their support as soon as the usefulness is demonstrated by actual trial.

III. College Professors are prone to seek a quiet, seclusive life and are all too frequently not known by even the immediate clientile of the institution. A system of extension lectures and courses should therefore be arranged with the nearby high schools. We have recently adopted a plan which we hope to see in operation this winter. The Professor of Secondary Education secures from different members of the Faculty a list of lectures they are

willing to give during the year. A list of all these is printed and sent to our high school principals within a radius of a hundred miles of the University. They are requested to select the lecturer and subjects of his desired and the Professors agree to deliver these at a nominal fee of $10.00 a lecture to cover expenses. The principal then selects, say, five lectures and offers season tickets for $1.00 to adults and 50 cents to school children. All over $50.00 is profit and goes to the literary fund or other improvement. The lecturer is sure of his audience. The people hear an instructive lecture and at the same time aid the development of the school. It is a very useful and simple way to bring the learning of the colleges to the high school pupils and the people. The stereopticon, the college apparatus, are made available to an ever widening constituency. The high school pupil and his parents become acquainted with several of the professors, who will be entertained at the homes of the town. A friendship and mutual understanding is developed which will be helpful to teacher and pupil when he enters college.

By extending the lecture course corps to the Faculties of their institutions, the University extension lecture courses could easily be made to cover the state. As the work developed marked extensive and expansive courses may be offered.

IV. But the greatest good to the high schools from the University can come through inspection and accrediting of schools. I say this after nearly three years' experience in working with the high schools of my own state and observing the effect of these inspection visits and of the accrediting of the best schools. It has become a real pleasure to revisit our schools and note each year the evidences of growth, also to visit weak schools and confer with boards of education, the city councils and teachers are needed improvements so that the schools may come up to our requirements of a standard high school.

I can see the effect in the smaller schools ever trying to arouse local interest, to improve conditions and in the interest manifested in the pupils themselves in the annual visits, the rating of the school, on inquiries as to standing of certain preparatory schools and in a desire to hold up the honor of the school in college. It is bringing about unity of standard, sympathy, co-operation, helpful criticism of educational problems and a wholesome rivalry.

But I will not rest the case upon my own observation, but propose to give the results in the Middle West in some recent letters I have received from the inspectors in the several state Universities.

UNIVERSITY OF MISSOURI.

Columbia, Mo., November 9, 1906.

Professor J. S. Stewart, University of Georgia, Athens, Ga.

Dear Mr. Stewart—Replying to your favor of November 6th, I beg to state that our experience in Missouri, as well as the experience of other Universities in the Middle West, demonstrates that efficient inspection tends to give high school teachers good standards of work; to inspire them with zeal in prosecuting their work and with a desire to improve their scholarship and teaching skill by attending summer schools or in other ways; puts them into sympathetic relations with men in higher institutions and leads them to look to these men for helpful suggestions; gives the principals of schools greater influence over school boards in securing appropriations, as these boards like to have their schools as well rated in the state as schools in towns of similar size; leads the Faculties of the Universities to take more interest in the work of the schools; and, by making pupils in the accredited high schools of the state feel that the way is wide open to a higher education, increases the enrollment in institutions of higher rank.

Twelve years ago there were not a dozen high schools in Missouri that could prepare students to meet present entrance requirements. There are now 124 accredited schools in this state, of which 109 are public schools, and the work is just well begun. Through the stimulating influence of our inspection we hope to have 200 accredited public high schools in Missouri within a decade, and that without state aid to high schools. During these twelve years, though standards have been greatly raised in the University of Missouri, the enrollment has increased from less than 400 to about 2500, in keeping with the growth of the accredited schools. This year over ninety-five per cent. of our new students entered by certificate from schools accredited to this or other good universities. Others had to take entrance examinations.

Sincerely yours,

A. Ross Hill.

OHIO STATE UNIVERSITY.

Columbus, November 10, 1906.

Prof. J. S. Stewart, Athens, Ga.

Dear Sir—This is in reply to your letter of November 6. I am pleased to have the opportunity to answer the questions you ask.

First, what is the effect of University inspection upon the high

schools? I wish this might be answered by some of the school superintendents of this state. At a schoolmaster's club banquet held in this city last week, it was the universal testimony that the state had done nothing which had had so stimulating an effect upon the high schools of Ohio as the inauguration of high school inspection by the State University. It has been helpful in securing a better equipment, stronger teachers, larger libraries and better buildings. More care has been shown in the arrangement of courses of study. The school superintendents are looking to the University now to help them in securing right sentiment in their own communities.

Second, what is the effect of the inspection of high schools upon the University? One of the difficult things is to get a college Faculty to realize that there are limitations upon the high school. We think we have accomplished that here. More than that, the members of our faculty take greater interest than ever before in secondary education. Perhaps the greatest good that has been accomplished for the University lies in the fact that we have the best prepared body of students in the history of the institution. About 95 per cent. of the students who entered the University this fall entered by certificate.

Inspection seems to have accomplished another very great good, viz., it has stimulated a greater desire among high school students for college education. I do not mean to say by that that we get the students. Many of them go elsewhere.

While there was considerable opposition to the inspecting plan within our own Faculty when it was established five years ago, I believe now there is not a man in the University who does not consider it a wise step.

Very sincerely,

W. W. Boyd.

THE STATE UNIVERSITY OF IOWA.

Iowa City, November 10, 1906.

Prof. Jos. S. Stewart, Athens, Ga.

My Dear Mr. Stewart—Permit me to reply to your questions on behalf of this institution.

(1) I believe that University inspection and accrediting of high schools has had a very stimulating effect upon secondary education in our state. At first a few of the larger, stronger schools were accredited and their students were permitted to enter the University without examination. Other communities quickly saw the addi-

tional recognition given to such schools, and began to revise their course and improve their equipment, etc., looking towards meeting the requirements for accrediting. The result has been that about 175 high schools in Iowa have been brought to the accredited list, thereby raising the educational standards of that number of communities. I am inclined to believe that a far smaller number of schools would be offering at the present time four-year courses of study were it not for the spur of being recognized as accredited schools. It is true that some of these schools send comparatively few students to college. The effect, then, of such course of study is upon the community locally, and the boys and girls are prepared for better work in their respective vocations. However, an increasingly large percentage of our Iowa graduates pass on to higher institutions.

(2) The effect upon the University is that it is kept in the closest contact with the secondary schools; it must necessarily in many cases meet the demands of the secondary schools and doubtless receives many students who would scarsely be able to enter the institution on strict examination. It is barely possible that this list may have a tendency to draw into the University students not well prepared to carry forward the work, and the number of failures may be increased somewhat because of this. The standard of graduation, however, has not been lowered, I am sure, and the ultimate effect of drawing more generously from secondary schools must be wholesome upon the educational interests of the state.

Very truly yours,

FORREST C. ENSIGN.

UNIVERSITY OF ILLINOIS.

Urbana, Ill., November 9, 1906.

Prof. Jos. S. Stewart, Department of Secondary Education, Athens, Ga.

My Dear Sir—I take pleasure in giving you my view of the value of University inspection as follows:

We find that University inspection and accrediting greatly stimulate and unify the work of our high schools. In the case of many of our high schools, their complete organization and real efficiency date from the time when they first began to prepare for accrediting at the University.

It is the universal testimony of our high school people that this

relationship is a very helpful one. From the University point of view, we are satisfied that the accrediting scheme is much to be preferred to any system of examinations.

An analysis of the results indicates that we get a higher grade of scholarship on the average on the part of those entering the University on the certificate plan, than we can get from those who enter the University on examinations.

At least 75 per cent. of our students now enter on the certificate basis. This is only an approximate estimate, but the registrar assures me that it should be higher than 75 per cent. rather than lower.

Very sincerly yours,

H. A. HOLLISTER, High School Visitor.

THE UNIVERSITY OF NEBRASKA.

Lincoln, November 9, 1906.

My Dear Prof. Stewart—I quote from my biennial report to the regents, made this week, the section applying to your request, Has all this work paid the University? Two years ago there were 100 accredited schools. Today there are 145 and 15 more are ready for action by the Committee.

A year ago last March statistics compiled by the Registrar showed that from the (then) 120 accredited schools nearly 1600 students were in the University. From the remaining 325 unaccredited high schools in Nebraska, only 272 students had come. Moreover, 12 per cent. of these 272 were failing or doing poor work, whereas of the accredited school students a trifle over 6 per cent. were delinquent. Statistics compiled in October, 1906, show that the Freshman class is the largest in the University of Nebraska. Of this record breaking class, 70 per cent. came from our accredited schools, 7 per cent. from the unaccredited and the balance from normals and schools outside of the state. Since these outside schools are the large schools accredited to adjacent state universities, it follows that over 90 per cent. of our Freshman class comes from accredited schools. That is, a relatively small number of accredited schools are practically furnishing the University its entire attendance and rapidly increasing that attendance. The better the school, the better the student, the more likely he is to go on with his education.

The conclusion is clear and convincing. Whatever the Chancel-

lor and Regents can do to increase our accredited schools will increase our attendance and raise our scholarship attendance.

Cordially,

T. M. HODGMAN.

STATE INSPECTOR OF HIGH SCHOOLS.

Minneapolis, Minn., November 10, 1906.

Prof. J. S. Stewart, Athens, Ga.

Dear Sir—I have your letter of November 6. This state makes a special annual grant, as you probably know, to each high school. An inspector is employed by the state, not University, to visit and advise the various schools. He is supported by a few general regulations adopted by a state high school board. An inspector was appointed fourteen years ago. So far as tangible results are concerned, I may mention the following:

1. A body of high school instructors, 85 per cent. of whom are college graduates.

2. A minimum wage of $450 for instructors and $900 for superintendents has been established.

3. Substantial brick buildings, with an assembly room, laboratories, recitation rooms, superintendent's office, reference library and apparatus are almost universal.

4. During these years the number of high schools has risen from seventy to one hundred and ninety-two. The expenditure for libraries has increased from $2300 to $24,000. The actual expenditure for apparatus has risen from $5,400 to $26,000. The annual expenditure for supplementary reading in the grades, connected with these schools, has risen from $1500 to $14,000. The summary of expense for equipment in these various lines has increased from $9000 to $72,000.

5. The enrollment of high school students at the state University has more than doubled. It is now between four and five thousand. The credit for this prosperity is due, in my judgment, to four factors:

(1) Our people have a general desire to build up good schools. They are willing to tax themselves. In addition to aid from state sources our local voters levy an annual tax from six to thirty mills on each $100 of property (assessed valuation).

(2) We have had wonderful material prosperity, enabling our people to pay heavy taxes without bankrupting themselves.

(3) Our system of state aid began with $400 a year for each

school. The amount has been raised to $1500 per school. To obtain the award, the schools have been led to provide good buildings and to comply with very reasonable regulations of the board as to equipment, salaries, educational qualifications of instructors, and the like.

(4) An inspector of high schools.

You will see that I have answered your inquiries rather from the point of view of the state of which I am an employee, than from the point of view of the university, to which our entire system is loyal. We are proceeding on the plan of building up a great system without particular reference to the University. The result is that the University shares with the state in the general prosperity. We sent the state University twelve hundred Freshmen this fall. We shall send twice that number ten years hence. All our high schools, large and small, are on our state list. I believe that the small town of Minnesota, with a population of one thousand, has a better high school than is to be found in the corresponding towns of any other portion of the habitable globe.

I have been the inspector from the first. I will say that in case a man can go into the field absolutely independent and untrammeled, the opportunity to advise, encourage and direct is simply boundless. If he will visit each school annually, make acquaintances and criticise impartially, his mail will be loaded down weekly with inquiries relative to proposed new buildings, teachers, superintendents and courses of study. It would be a good thing for your university to appoint an inspector. It would be a better thing for your state to appoint one. Probably 95 per cent. of our University students enter from accredited schools.

Sincerely,

GEORGE B. AITON.

THE UNIVERSITY OF MINNESOTA.

Minneapolis, November 13th, 1906.

Mr. Joseph S. Stewart, Athens, Ga.

My Dear Prof. Stewart—In answer to your letter of November 6th, I will say that in the earlier years of my administration here the high schools of the state were officially visited, more or less, by members of the Faculty of the University of Minnesota, including myself; sometimes a visit to a high school was productive of good, but the impossibility of having the same person visit the same school a number of times in succession, so as to note progress and changes, rendered the result less satisfactory than it would

otherwise have been, and the engagements of the professors at the University interfered with their freedom in visiting the high schools to as great an extent as would have been desirable; besides, different inspectors having different standards, we did not have the means of accurate comparison of different schools. On the whole, the result of such visiting of high schools was not satisfactory, and our State High School Board, of which the President of the University is an ex-officio member, substituted for this a high school inspector, on a salary, whose whole business is to inspect high schools and report the result to the Board. The result has been most satisfactory, the schools have been improved and the number of graded schools that have been raised to the rank of high schools has increased and the general efficiency of the work is much greater than it could have been under the irregular visits of the University Faculty.

The accrediting of schools to the University has some very marked advantages, though it is attended by some slight disadvantages. Under our system the University furnishes certain blanks to be filled out by the Principals of the high schools certifying that the student who applies for entrance has successfully pursued the preparatory studies the required length of time, amounting in the aggregate to a sufficient number of credits for admission. I can not tell just what per cent. of our students enter upon such certificates, but speaking unofficially, I should say a large majority of them do so enter; I should think it probable that 85 per cent. enter upon such certificates. I think it evident that the student is held to a closer inspection in the preparation for the work of the University if he is required to pass an entrance examination before going on with his work, as is the custom of some of the Eastern colleges; but we avoid the trouble of the examination and give the benefit of the doubt to the country boy who has had to do some other things, in addition to his preparation for the University, and who does not remember everything he has learned, and by careful watching the work done during the first semester the students are dropped who show that their preparation was not sufficient, or that they are not industrious enough to maintain their position, and in this way we get rid of any undesirable material early in the year and practically have an examination of the students during the first six weeks of the term. This is much more thorough and much more just than a single entrance examination would be.

Taking it by and large, I think that our present system is the most desirable of any we have tried. I have dictated this promptly

upon finding your letter upon my desk, on my return to the city after a two days' absence, in order that you may receive it as early as possible, and I have not elaborated the paper as I might have done, if I had taken more time.

With all good wishes, I am,

Very truly yours,

CYRUS NORTHROP.

UNIVERSITY OF KANSAS.

Lawrence, November 12, 1906.

Prof. J. S. Stewart, Professor of Secondary Education, Athens, Ga.

My Dear Sir—I began the work of inspection three years ago last September. Prior to that time there had been no systematic work along that line. We have at the present time one hundred fully accredited schools, sixty of which are meeting the minimum requirements of twelve units for admission to the Freshman class and in some cases one or two units in advance of this, and we have also a list of fifty schools that offer two years or perhaps two and a half years of work which is recognized by the University.

The influence upon the high schools has been first, to unify the program of studies. All of these schools have outlined their work along the same general lines. Secondly, it has raised the standard of work in the high schools. It has brought about a demand for teachers who are better prepared. Third, it has created better ideals among the patrons of the high schools, and especially has been of great service to the school boards. Our letters of information to the boards, as well as to teachers, have given them definite ideas of how high schools should be run and what constitutes high school work of high grade. Fourth, the high school inspection is responsible for the equipment of more than half of the laboratories now in existence in our high schools and also for a very great improvement in library facilities. This has been one of the most noticeable effects. Fifth, inspection has brought about a classification of the work to such an extent that most of our high schools now employ specialists to teach in the various departments, thus improving the character of instruction very much. The fact that the University is looking into the high school occasionally, sending literature, and showing interest in its welfare, has infused a better school spirit. Every student realizes that he is in line for a college education, and it has undoubtedly increased the number who attend institutions of higher learning very largely.

The benefits to the University may be inferred from the above

statements. We get a better class of students. Their preparation is more uniform. They understand how to take charge of laboratory and library work. It has popularized the University, not only among the school people of the state, but among general citizenship of every town that maintains a high school. Fully 90 per cent. of all the students that enter the University enter by certificate. The number of failures is less and the standard of work which we are enabled to do in the first years of the college is higher.

Very truly yours,

W. H. JOHNSON.

UNIVERSITY OF WISCONSIN.

Madison, November 30, 1906.

Prof. Joseph S. Stewart, University of Georgia, Athens, Ga.

My Dear Sir—Where there is not systematic state inspection, the inspection by University professors is unquestionably of great value in establishing standards and in holding up the character of the work in the high schools. Where there is a state system of inspection, as in Minnesota for instance, inspection by the University is not so necessary. Throughout the Northwest school men have come to believe heartily in the accrediting system. There was for a time some criticism on account of the inspection by professors from the University. Their ideals were oftentimes much higher than the school men believed they could reach. During the last eight years this condition has been modified by the appointment of a special high school inspector. In nearly all of the states in the Northwest the high school inspector does most of this work. In Wisconsin, however, we have considered it best to send out, to the larger schools at least, representatives of the different departments in the University. We believe that we keep the inspection up to a higher grade by means of this system.

The effect on the University has undoubtedly been in the direction of stimulating its growth. I do not think we should have had such large state Universities in the Northwest had the examination systems remained in force. Hence in the Northwest we are pretty thoroughly wedded to the idea that educational doors should be open all the way through to the bachelor's degree. I imagine something like 80 to 90 per cent. of our freshman class enter on the certificate plan. Our registrar is absent and I cannot give you definite figures. It may be possible that the certificate plan leads to a lowering of the standard in the freshman class. This view has sometimes been urged. Many, however, agree with Professor

Thorndike's view as expressed in his very interesting article in The Educational Review for 1905-6, that the examination for admission to the University is no real test of the ability of the student to do University work.

Very truly yours,

A. W. TRESSLER, Inspector of Schools.

INDIANA UNIVERSITY.

Bloomington, Ind., November 15, 1906.

Prof. J. S. Stewart, Athens, Ga.

Dear Sir—I am not, technically speaking, University inspector; rather I am the high school visitor, without authority to commission high schools. I spend three months each year in visiting commissioned high schools, studying the actual conditions and making suggestions in the way of changes in the curriculum, methods and equipment. By this means I aid somewhat in keeping the high schools and the University in close touch. The power of commissioning rests with the state Board of Education, which is composed of the presidents of the three state Institutions, the State Superintendent, three city superintendents, and two or three others.

Very cordially yours,

E. O. HOLLAND.

UNIVERSITY OF MICHIGAN.

Ann Arbor, November 12, 1906.

Prof. Joseph S. Stewart, Athens, Ga.

Dear Sir—In replying to your letter of inquiry, permit me to say that you will find our experience briefly expressed in an article written by myself and published in the United States Commissioner's Report, page 534, for the year 1902. You will not only find my own view of the case, but a quotation from President Angell which may be of service to you. Whatever we have said there would be more than confirmed by our experience since that article has been written. Practically all of our students enter upon certificate, not more than one per cent. coming in by the examination door at the present time.

Trusting that we may have the benefits of your discussion, I am,

Very respectfully,

A. S. WHITNER.

THE UNIVERSITY OF CHICAGO.

November 15, 1906.

Prof. J. S. Stewart, Athens, Ga.

My Dear Sir—Your letter to Prof. Butler was referred to me for reply. Answering your questions, I would say that our experience with the inspecting and accrediting high schools has proved that this method of work is productive of very good results. We take pains to send to schools only those men who know how to appreciate secondary schools and know good teaching when they see it, and we accomplish in this way two very valuable ends. First, we get a first hand knowledge of the school which enables us to deal with it intelligently, and in the second place, we are often able to do the school much good. It often happens that there are certain teachers in a school who are not doing the best work, but whose removal is too delicate a matter for the Principal himself to effect on account of local connections. Our criticisms are always made in a kindly spirit; but when we find any department taught in such a way that the work could not possibly meet our requirements for admission in that department, we frankly say to the officers of the school that we cannot accept the work of such department. The result of this action has been to strengthen the department in the school.

We use every means in our power to come into a close touch with the schools. One of the very best of all is being illustrated as I write. I am referring to our annual conference with the schools which are in the relation of co-operation with us. These conferences take place tomorrow and next day. You will be interested, I am sure, in the program of exercises which I am enclosing. These conferences have been held annually, and in some years semi-annually ever since the University was founded.

As to the comparative number of students admitted from these schools upon certificate, I would say that practically all of our students are so admitted. Of course, the value of such a scheme depends entirely on the manner in which it is worked out. We try to make the certificate mean something to us by knowing the school; and in the case of most of the schools which send students to us, we feel that we have a pretty good knowledge by personal experience both in visiting the schools and in meeting the teachers as they come to us. Another thing of great value to us is the fact that so many teachers from the secondary schools come to us for study during the summer quarter. By this means we are able to

know them better and to be of valuable assistance to them further preparing them for their work; at the same time the University and its ideals and expectations become better known to the teachers.

Trusting that these remarks may be of some interest to you, I remain,

Very truly yours,

F. J. MILLER.

When inspection is done by the University, several methods are used, varying with the means of the institution. Michigan started with different professors visiting for a week at a time, but later adopted the regular inspector plan. All of the North central state Universities except Minnesota employ a regular inspector, who also has a class work in department of education. Mississippi inspects through the different professors as they find time. Texas has a regular inspector, so has Georgia.

In New England the Entrance Certificate Board is endeavoring to accredit schools through examination test courses of study and the records made by the students from preparatory schools through several years. The plan cannot have as stimulating effect upon the school and community as personal visits, and results show greater number of unsatisfactory students than under the inspection plan. In 1900-04 the per cent. of unsatisfactory students ranged from 117 in Greek to 247 in mathematics.

It is well established in the Middle West that accrediting is of little avail and of doubtful value without rigid inspection. Catalogues are prone to our statement and examination tests are a process of weighing, not of feeding.

With a Professor of Secondary Education in some of the Southern states and a great number of well accredited schools in Mississippi and 125 in Texas through University inspection, it seems to me that the hour has come when we should adopt a definite system of interstate accrediting and standardize our secondary schools and a college entrance throughout the South.

At a recent meeting in Williamsport, Mass., called at the instance of the National Association of State Universities, at which were representatives of the five organizations of colleges and secondary schools, a resolution was adopted urging the Middle States and Southern States to create an Entrance Certificate Board. The Southern States Association of Colleges and Preparatory Schools deferred action until this meeting, desiring to co-operate with us and hoping for some plan to be devised by which all the institu-

tions could avail themselves of the inspection through the state Universities and state Department. Virginia has just adopted aid to high schools, South Carolina is planning to do the same, Texas is considering changes in her system, Georgia has 82 schools on her list and has issued a hand-book for high schools and is planning a second edition, Florida is readjusting her curriculum, in fact, all the states are ready for some concerted action.

At this our second conference of secondary Professors and educators, I recommend that the several Professors of secondary education, where appointed and in other states, the offices designated by the Chancellor of the University or state department, be authorized to prepare a joint High School Hand-Book, defining and prescribing therein unit courses of study in the various subjects of the high school program, including industrial branches, to arrange for uniformity, efficiency and economy in high school inspection; and to prepare a list of High Schools within the twelve Southern States, according to three and four-year courses above the grammar grades, entitled to accredited relations.

In each state the Professors would secure the suggestions and criticisms of the several institutions of their state, desiring to cooperate, as well as the faculty of the state University. The hand-book would represent, therefore, the best thought of the South and would carry corresponding might. Due consideration would, of course, be given to the reports of the Committees of Ten and Thirteen, in preparing this hand-book.

The Professor of Secondary Education would be the medium of exchange and communication among the colleges of his state and with the members in the other states. Every College and High School adopting the system and agreeing to conform to the same would be entitled to membership in the state conferences to be held each year, probably at the state Summer School.

The Interstate Committee would hold annual meetings, probably with the Southern Association of Colleges and Preparatory Schools at this meeting, and issue reports, giving list of schools approved and extent of approval. Uniform blanks for annual reports from schools and for entrance certificates would be prepared and would be used throughout the South by all institutions affiliating or desiring to use them.

In this way, gentlemen, each state will feel the added pull and incentive for better work of every other state. A school approved in Georgia would be known in Texas and have educational standing throughout the United States. It would act as a powerful

stimulant upon boards of education. It would through the high schools open to all the colleges and tend to destroy clanish relations. Colleges will be able to determine the preparation of students presenting themselves for entrance, the way to college will be made easier to thousands of youths and the educational standards will be raised. College entrance will be put upon the unit basis, and while not uniform and iron clad, will be defined in a given number of required and elective units, so that the applicant may know where he will be placed. In this way the colleges themselves become grouped according to well defined standards.

We have the necessary machinery in each state. We need at this meeting to blend these different agencies into a far-reaching plan to unify the educational forces of the South.

Our fathers fought to establish a political confederacy, and the best blood of all our states commingled with the dew on old Virginia's hills. They failed, but left us the beginning of a great public educational system. Let us unite to perfect this system and form a confederacy against ignorance, and to promote intelligence, freedom and character in our beloved Southland, for which they died.

Science in the High School.

By PRESIDENT BROWN AYRES, University of Tennessee.

President Brown Ayers is probably the greatest living authority in the South on the subject of physics. This paper was read by him before the Conference of Secondary Education in the South, held at the University of Virginia, November 23rd, 1906. He has kindly consented to allow us to present the paper.

The importance of the introduction of good courses of study in the physical and natural sciences in the high school is now universally admitted, not only on account of the high educational value of these subjects, dealing as they do with real things and tending to give to the earnest student of them definite, precise ideas, but also on account of the direct bearing of the sciences on the everyday life of the larger proportion of the pupils in the schools the great educational value of these subjects can hardly be overestimated. In order, however, that any real educational result may be obtained, in the limited time and under the conditions in which the subjects must be taught, in the high schools care should be exercised

that only those subjects be selected for study that have the most definite educational value and the most important applications to the ordinary affairs of life. If another plan be adopted, if temptation be yielded to to introduce all of the "ologies" that one might name, the educational results are likely to be far from satisfactory, the pupils getting only a vague and indefinite knowledge of many things, and that knowledge being so jumbled up and without form that little educational value results. I would strongly advise that the attention of high school teachers be limited to instruction in the elements of physics, chemistry and biology, using this latter term to indicate the more elementary phenomena of life both of plant and animal. Each of the sciences named has a field of its own that is not definitely covered or overlapped by the others. But such subjects as astronomy, geology and like sciences that are secondary in character and the principles of which belong to one of the sciences first named, do not have educational value in the same sense as the primary sciences on which they rest. True, they present a large number of new and interesting facts, but these facts uncorrelated and unexplained as dependent upon the fundamental laws of the primary sciences interesting as they may be, are not of as great importance as the fundamental laws from an educational point of view. Again, the primary sciences named, in the hands of the skillful teacher can, with relatively small outlay for apparatus and by the large use of the laboratory method, be made most interesting to pupils, and through this awakened interest, both instructive and helpful in their intellectual development. Each of the three primary sciences has a special value. All are needed for a comprehensive understanding of nature. I will consider them briefly in the order first named.

The educational value of the study of physics is acknowledged by all who have given the matter due thought. The comprehensive character of its laws and the exact form in which they can be stated, produce an outlook both broad and accurate. Bacon calls physics the "Mother of sciences," and this naming is exact. As dealing with the great fundamental laws of matter and energy to which all the operations of nature are subject, it furnishes to the other sciences the foundation on which any stable structure in their special domain must be erected. While not strictly an educational argument, the widespread application of the laws of physics in industrial operations, is another reason why as much of this science as practicable should be taught in our schools.

Two general difficulties have been encountered in the attempt

to introduce widely physics into the schools. These are the inherent difficulties of the subject, due to its broad generalizations and its precision, and the difficulty of procuring the requisite apparatus for the demonstrations by the teacher, and the actual manipulations by the pupil. I would suggest that the first difficulty be met by avoiding the broader generalizations at the outset, by shunning the use of mathematical formula where possible, and by taking as the subject matter of the course those departments of the science in which the pupils have already a considerable amount of accumulated experience. Many of the laws of nature (as the laws of falling bodies and of those thrown by the hand or fired from a gun), of gravitation, of elasticity, of the motion and pressure of fluids, of sound, heat and light, are already matters of experience with the pupil when he comes to take up the subject. The child begins his work in the physical laboratory even before his birth in the world, and at no moment of his waking life is this laboratory work entirely stopped. He has thus accumulated a vast amount of experience, which can be used by the intelligent teacher with telling effect. The motions and appearances of the heavenly bodies can also be made to serve in many ways in illustrating the study of the parent science. Of course, the laws controlling the phenomena with which he is so familiar are not already recognized by the pupil in their inexorable and exact character. The raising of this mass of empirical knowledge up to the scientific plane would be the main idea of the elementary teacher.

There is too much tendency to look upon physical demonstrations and experiments in the light of legerdemain, and the teacher, unconsciously, perhaps, selects his illustrations too much with the object of pleasing rather than of instructing. It is for this reason that the subjects of electricity and magnetism seem to be so fascinating to both teacher and pupil. Now, if the *truth* is to be taught about electricity and magnetism, it is an extremely difficult part of the subject, even for mature students. Very little that is within the grasp of young pupils can be taught by electrical phenomena that cannot be taught by other phenomena coming more within the range of the pupil's experience. I would, therefore, urge that the great stress of the course be *not* put on this part of our subject, as seems to be expected and desired by the average text-book writer of to-day, but that fuller use be made of the every-day experiences.

While some apparatus is certainly desirable, if not absolutely necessary, in every school undertaking this subject, the intelligent

teacher will find a working laboratory all about him. Striking experiments require special apparatus; principles can be taught by that which is homely and home-made. The teacher of physics should have an eye open at all times for odds and ends that are usually thrown away, but which are capable of excellent service. Tin and wooden boxes and cans, pieces of wire and strings, rubber bands, bottles, corks, bullets, and shot; in fact, almost any old thing can be made to serve a useful purpose in illustration, if properly utilized. Every physics teacher should learn the use of simple tools for working woods and metals, should learn to solder metals, and to bend and cut off glass tubes. In fact, even to the Professor in a finely equipped university, these arts are not only useful but essential. How much more must this be true of the teacher who must rely upon—almost exclusively—his own ingenuity and mechanical skill for the successful illustration of his subject. I was struck by an exhibit at one of our expositions of school apparatus for physics as devised and used in Japan. The ingenious use of native material was very striking. Bamboo was everywhere. In apparatus in which we would demand glass tubing, the bamboo was used quite as successfully. I am sure that a little of the same kind of patience and ingenuity will enable our Southern teachers to find about them materials quite as easily adaptable as those used by the Japanese. After all, the problem in successful physics teaching, like that in all teaching, is to have the right man in charge of the work.

The subject of chemistry will ordinarily be found more interesting to the majority of students than that of physics. The reasons for this are not so far to seek. In chemistry the principles are not so abstruce and there is continued and repeated application of the same principles to the various elements and compounds studied, so that the pupil soon comes to gain a familiarity with the necessary working ideas which is much more difficult to obtain in the science of physics on account of the much greater variety of ideas there met with and the somewhat more definite and accurate notions that must be had in order to deal properly with physical phenomena. Again, the experimentation that can be given to the beginner in chemistry, attracts and appeals to him much more than that which can be given in physics.

The phenomena are somewhat more novel than many of those constituting the elementary study of physics. As a matter of practical fact the chemical laboratory course can be successfully conducted with a less expensive outfit and a smaller variety of

apparatus for each pupil than is the case with physics, and with these few simple pieces of apparatus provided for the student of chemistry, a very large number of experiments may be performed. Thus the difficulties of manipulation are perhaps not so great as in one sense are the manipulations of physics. I would, therefore, urge that the study of chemistry, although logically succeeding that of physics, which, as has been said, is the "mother of sciences," should for many reasons precede that of the parent science. The organization and conduct of a laboratory course of instruction in chemistry is much simpler, and can be successfully carried out by a less skilled teacher than would be required for a correspondingly good course in physics. Of course, in making this statement there is no desire or intention to assume that chemistry in its advanced study does not demand all the skill and ability for its successful prosecution that is demanded by physics or by any other subject, but simply to state that in its elementary aspects the subject is more capable of being handled by the average teacher than either physics or biology. It is of the greatest importance, as it seems to me, that in chemistry as in physics, special stress should be laid upon the study of those elements and compounds that have formed the every-day experience of the pupil. It is well enough in its way to let the pupil know that there are rare elements that he has never met with and to exhibit to him such elements and their compounds of curiosities, but not too much time should be spent on the study of the compounds of these elements, or of these elements themselves, but rather the main attention should be given to the things in every-day life. In this way, definiteness of idea and confidence of knowledge may be obtained and unless this result in definiteness and confidence is obtained ,half of the value of science study is lost. Difficult as is the study of the compounds of carbon when this study is pushed very far, the fact that the every-day experience of the pupil brings him into contact with carbon compounds to a great extent, makes it imperative that some study, as scientific as it can be made, should be given to compounds and particularly to those compounds that have to do with food. The fact that a large number of pupils of the high schools are in some way, or will be in some way, connected with agriculture, makes it of the greatest importance that their chemical studies should be directed towards an understanding of the principles of fertilizers, of soils, and the physiological processes of plant and animal growth. To obtain this end within the limited compass of the high school course, the teacher must perforce be content with a somewhat hurried, and,

perhaps, unscientific study of the subject matter. Nevertheless the mistake should not be made of passing over these subjects because of their difficulty, or, at least, because of the difficulty of the theory of the information of this class of bodies. The relation of chemistry to agriculture and to manufacturing industries gives it great fascination for a large number of pupils, and this natural interest should be seized upon to attract and hold the attention of the pupils to the scientific principles underlying such application, thus giving them an insight into the general character of the laws of nature.

The biological sciences, of course, are not subject to as definite mechanical laws as are the sciences of physics and chemistry. Nevertheless, general principles may be made evident in biological studies without introducing complexities that would defeat the end in view. The study of typical plants and animals with reference to their development and physiology will prove a most fascinating study in the hands of a good teacher. I do not value highly at this stage of educational advancement, a study of the systematic botany or zoology. I would rather stress the study of life histories and the principal function of a few typical plants and animals, without any special consideration of their relations in a system of classification. The main point will be to bring out clearly the idea that all plants and all animals are subject in their development and life to great fundamental controlling laws that determine the conditions of their existence. The characteristic properties of all living things may be studied without bringing in unnecessarily complicated terms or complex applications. In the study of a great science, like biology, one must be content to "make haste slowly." I believe that here also it will be found far wiser to take for study things that occur about us in our every-day life, so that the pupil will be led more readily to understand that in the study of this science we are not dealing with something afar off, to be represented by specimens brought from a great distance or from some strange land, but that we are dealing with the phenomena and the growth of every blade of grass or every grain of corn or wheat, with the simplest animal life familiar to the child and with the relations of these things to the surrounding conditions in which they live and thrive, or to their environment.

It is not my idea or the purpose of this paper to suggest in any detail whatever the methods of instruction in any of the sciences named other than in the most general terms. After all, such suggestions would only be an indication of individual experience or preference. The well trained teacher—and none other than the

well trained teacher should undertake to take any of the subjects named—will naturally adapt himself to the particular conditions under which he works, and will from the material at hand evolve a method of instruction best adapted to the utilization of such materials. One general idea must, however, be stressed as much as possible, and that is that no mere book study of any of the sciences named will have any educational value that is worth while. Unless the teacher is in a position to make the study of the subjects real by proper laboratory work in which the students participate, it would be better to omit the study of one or all of these subjects and substitute for them some other subjects that can be presented in a way most calculated to bring about the development desired. In making plans for the conduct of science teaching it should always be borne in mind that the science teacher must have relatively more free time in which to prepare for the successful carrying out of his instructional work than is the case with the teacher of other subjects. For this reason the number of required hours for lecture or laboratory should be fewer for the science teacher than for the teacher of mathematics or the languages. Give reasonably good opportunities as to the necessary time and facilities, with a fairly trained teacher imbued with the true scientific spirit, there is no doubt whatever that the study of science in the high school will prove of the greatest possible educational value. It is to be hoped that all educational workers may so stress the importance of good teaching of scientific subjects that the school authorities will be willing to make provision for some good instruction even though it cost more, as it probably will, to secure a suitable instructor in any of the older subjects.

In conclusion, I do not hope that there is in the remarks above made any special novel contribution to the subject in hand. It has been my desire to simply call attention anew to some well known facts and principles in scientific teaching with the idea of stimulating a discussion of the subject, or, at least, a more serious consideration of the claims on science in the high schools.

Agriculture in High Schools.

By Dr. Dick J. Crosby, Director of Office of Agricultural Education, U. S. Department of Agriculture, Washington, D. C.

I am very glad that my colleague, Dr. Knapp, has prepared the way so well for my talk.

It is pretty generally accepted that there are two main objects of the high school course—one, preparation for college, and the other preparation for life's duties and pleasures. Likewise, the objects of teaching agriculture are two—to prepare for college and to prepare for life. A number of our colleges and universities and the school authorities of some of our States now include agriculture as one of the preparatory studies for college. The regents of New York have recently accepted this study, and a faculty committee of the agricultural college of Cornell University has prepared a syllabus, which has been accepted by the regents, covering a course of one year, which will be accepted along with any other subject for university preparation. This committee of Cornell University is now preparing a series of lessons and exercises to go with this syllabus. So also in Missouri. The University of Missouri has decided to accept one year's work in agriculture in the high schools for entrance requirements to the University.

The teaching of agriculture in the high schools is also a preparation for life's duties and pleasures; and that, I think, is the more important for our consideration here because it affects so many boys and girls. I do not minimize the preparation for college because I believe that in the colleges leaders are trained, and for fear that some of you may have misunderstood Dr. Knapp's reference to this, I may say that the reason as I see it that the sixty agricultural colleges in the United States have not been putting very many boys back on the farm is that advanced work in the science of agriculture has claimed all these graduates as fast as they have come out, and these young men are now the leaders of our agricultural thought.

I cannot blame the boys if they accept good salaries in this advanced work in agriculture, nor do I believe Dr. Knapp would do so.

It is the secondary school, then, that will touch more nearly the

people who go back in the country. Of the boys and girls in our secondary and elementary schools 95 per cent. do not go on to college. It is these we want to reach as well as the college boys and girls, and this training in agriculture in the secondary schools for the duties of life is primarily what Dr. Knapp calls training in home environment. It is a training that leads to a proper understanding and appreciation of this environment which is to have such a strong influence upon them throughout their lives.

Let us review very briefly what is now being done in the way of establishment of schools of secondary grade or schools in which agriculture of secondary grade is being taught. We find that there are (1) agricultural high schools connected with colleges of agriculture; (2) district agricultural high schools, as in Alabama and Georgia; (3) county agricultural high schools, as in Wisconsin; (4) special agricultural high schools, as in Pennsylvania, New Jersey and Indiana; and (5) public high schools (county, city, village and township) in which agriculture is taught.

The school of Doylestown, Pa., takes most of its students from the cities—Jewish boys. These boys have class-room work, plat work, and along about the third year they are given small farms. These farms range from one to thirty acres, depending upon the boy and his qualifications. If he wants to take up poultry raising, they fit up a poultry farm for him which he handles for two years. He is made responsible for it under the direction of the faculty. Some have little stock farms, some have farms upon which they raise grains, etc. Every boy who goes through that school is able to get a good position as a farm manager or superintendent. Many of them do not go through, but the graduates of the Doylestown School are in demand right on the farms of Pennsylvania and Ohio and the surrounding country.

Agriculture is taught also in the public high schools. I can do no better than to give you a view of how agriculture is successfully taught in some of these high schools than by telling you something of the work at one or two of these schools.

In eastern Tennessee is the Farragut School, out in the country, having about twelve acres of land, and five or six teachers, one a graduate of an agricultural college. The instruction is by means of text-books, lectures, laboratory work and outdoor work. Among other things it has a number of plats of wheat where they are trying a number of different varieties to see which is best adapted to that section of eastern Tennessee. The farmers are watching this work with wheat because they have not had a variety that seemed

really well adapted to that region. The school has a hot bed. Boys have been taught how to make a hot bed and run it. They raised enough plants there last Spring to supply all tomato and flower plants needed in the grounds and gardens and sold $10 worth to the farmers. They were raising two breeds of chickens there. The boys were learning the practical details of raising chickens in incubators and brooders. They actually sold eggs to the farmers in the surrounding district, to farmers who did not have enough chickens to supply them with eggs. They had a Babcock milk tester, and were testing milk for farmers, many of whom had pretty good herds of cows, but did not know whether this particular cow was paying or not. The boys were getting good training there in the practical affairs of life supplementing the text-books and lecture work with a study of publications contributed to the school.

Another school is in northwestern Pennsylvania at Waterford. This is a little school which might be duplicated in a hundred places in this country if we had the right teachers. There are three teachers in the school. It is located in a village of 770 inhabitants. It is a village and township high school combined. There are about 1500 inhabitants in the whole township. They pay $2,230 a year for teachers and $270 for other expenses. The teacher of agriculture is also a teacher of the other sciences and is a graduate of an agricultural college. This agricultural work is elective, but he has made it so attractive that last year 35 out of 85 pupils are taking it regularly. The first year they have instruction in plant life, the second year in field crops, the third year in animal husbandry, and the fourth year in the chemistry of plants and animals. They have their text-book work, lecture work, and their practical work.

This school is unfortunate in not having a foot of land that could be used for plat work, nor any other equipment except a little laboratory. They do their plant work, and instead of studying plants by reading about them, they bring them into the laboratory.

They also have their lectures on animal husbandry. After the lecture the lecturer takes the pupils out to barns in the vicinity to examine animals of the type under consideration, or else gets the farmers to bring them to the school, and the points he has been talking about are brought out with the animals right before the pupils. One day when I was at the school the class was taken to see a fine Hamiltonian mare owned by a man in the village. The mare was led out into the yard and one boy held her while the

different points were brought out by skillful questioning on the part of the teacher. After a while, one boy thought that for a Hamiltonian its head was most too long and it had too much of a Roman nose. We went immediately from there over to a livery stable where there was a fine black Percheron stallion. The owner brought him out and the boys and girls then and there compared the two animals.

When it came to the study of beef animals the class was taken down to a butcher shop and was shown there the cuts of meat—which were the valuable cuts, and were shown why it was important to get an animal for beef that is heavy in these cuts rather than in some other part.

When it came to the matter of studying farm machinery, they went to the warehouses of the implement dealers.

Here was a school with three teachers, very little money, very little equipment, and yet it was a school giving training in the affairs of life. It is what Professor Bailey would call a school of affairs. It had a faculty limited only by the number of farmers in that township. Those farmers were telling those boys and girls how they had succeeded. The laboratory facilities were limited by the same township boundaries. Every farmer in the community, every barn, and every warehouse and dealer in farm implements and supplies was contributing to the instruction of the boys and girls in that school. This method of instruction is popular in the whole surrounding country. When the teacher of agriculture, called away by a higher salary, left the school they went right back to the same college he came from and got another. And that, I think, is one of the best evidences of the satisfaction they felt there in the kind of instruction they were getting.

A point was emphasized here yesterday by Professor Payne and that has been emphasized here this morning by Dr. Knapp, I would beg leave to emphasize once more, perhaps in a little different way. It is this, that we cannot hope to put agriculture in all of our schools at once or at present. We must hit the high places. When we find a school where the conditions are right, and find a man we can put into that school to teach agriculture, we should strive to make a success of it there and that will open the way all the more quickly for successful work elsewhere. I do not believe in this law requiring the teaching of agriculture in all of the schools with the teachers we have at the present time. A good many things must be done before we can accomplish such wholesale introduction of agriculture into all of the schools.

And now, just a word concerning helps for those contemplating the organization of agricultural courses in high schools. One of the best things we have is the report of the Committee on the National Educational Association on instruction in schools for rural communities, published in last year's proceedings of the N. E. A., and also published as a separate bulletin. Then there are the reports of the Committee of Agricultural Colleges and Experiment Stations on instruction in agriculture. This Committee has been working along different phases of agricultural education for the past twelve years and has issued reports covering different phases of agriculture for college and school work. One of these reports has been published as Circular 60 of the Office of Experiment Stations on Agriculture in the Rural Common Schools, another as Circular 49 of the Office of Experiment Stations on Secondary Courses in Agriculture. I may say for this report that it has taken a number of school curricula and arranged parallel courses, substituting agriculture for some of the subjects which might be left out for the boy who does not expect to go to college. That is all that has been attempted in this. The Committee has not tried to create a new curriculum, but has taken conditions as it has found them, and made substitutions. These reports are on the table here. If there are any who do not get them at this time they can secure them by writing the office of Experiment Stations. Both of these reports have been supplemented by a report submitted at Baton Rouge last week, giving a series of connected exercises in agriculture, taking up the subject and running through it in a regular and connected way. Circular 49, Secondary Courses in Agriculture, was also supplemented by a report at Baton Rouge, which will be published soon, on lessons and exercises in agriculture, contemplating a course covering two years in the high school and based on the Indiana course in Circular 49. This course contemplates a little preparation in the way of a study of plants or economic botany and a study of animals or economic zoology.

The Office of Experiment Stations is also ready to send to any of you many other helps in the way of publications from the United States Department of Agriculture. We want the teachers to feel that we are anxious to be helpful to them in this whole movement, and we can furnish many of the Department Publications that will aid them, free of charge.

I will close with a brief statement concerning the work of the Office of Experiment Stations in relation to agricultural education. We feel that the movement for agricultural education needs a cen-

tral rallying point and clearing house. These functions are already performed by the Office of Experiment Stations for the agricultural colleges, experiment stations, and farmers' institutes. We have now begun to extend this work so as to include the rural high schools, elementary courses in nature study and agriculture in the common schools, movable schools for adult farmers and their wives, and other forms of extension work in agricultural education.

Congress has already passed the necessary legislation extending the authority of this office to work in these lines, but has thus far failed to provide adequate funds for the enlargement of this work. The present appropriation for this purpose is only $5,000, and this we have had for several years for the farmers' institute work alone.

As in the past, the educational work of this office will be done in co-operation with the State Departments of agriculture and education, the agricultural colleges and experiment stations, and the State and National agricultural organizations.

The lines of educational effort along which it seems desirable for this office to work may be briefly summarized as follows:

(1) To aid the agricultural colleges to reduce the results obtained by the Department of Agriculture and the experiment stations to pedagogical forms for use in agricultural colleges and schools of different grades.

(2) To aid the State departments of agriculture and the agricultural colleges and experiment stations in increasing the efficiency of the farmers' institutes and other forms of extension work in agricultural education for the masses of farmers and their wives and children.

(3) To aid the agricultural organizations in the several States in promoting an efficient organization of the rural high schools, consolidated common schools, and other educational agencies best adapted to secure a high state of prosperity and contentment in rural life.

(4) To aid the agricultural colleges and other State educational institutions and officers in preparing and inaugurating training courses for teachers of agriculture in secondary and elementary schools.

(5) To make available to teachers and pupils in schools in both country and city the results of the work of the Department of Agriculture and of the experiment stations which are adapted to instructional purposes in connection with nature study and elemen-

tary agriculture, the object being to impress our youth with the dignity, value and attractiveness of country life and pursuits.

(6) To introduce experimentally new features of agricultural education which may be of value in connection with our educational system. Just now it seems desirable to find out how far a system of movable schools or short courses may be used to supplement the farmers' institutes.

(7) To make a special effort to increase the efficiency of agricultural instruction in the negro land-grant colleges in order that the funds granted for negro education by the Federal Government may contribute toward keeping the negro on the farm and making him a more efficient factor in agricultural production rather than, as is largely the case at present, drawing him away from the farm.

(8) To prepare and distribute suitable charts and other illustrative material on agricultural subjects for use in schools, farmers' institutes, etc.

And now, Mr. Chairman, I want to thank you on behalf of the Office of Experiment Stations for this opportunity of meeting with this Conference. I feel that it has been a most valuable meeting, and it has aided me to get the views of many eminent men on different subjects. I shall go back to the office better prepared to appreciate the problems that are troubling the secondary school men of the South. And to the Conference in general I want to say that I am deeply interested in this whole subject, and anxious, indeed, to have an opportunity to be of some service in promoting this side of elementary and secondary training in your schools.

Agricultural Education in Secondary Schools.

By Prof. W. Lochead, Macdonald College, St. Anne de Bellevue, Canada.

I deem it a great privilege to attend this Conference and to meet the educational leaders of the South. Your outlook is so hopeful and your energy so irresistible that I am rather timid as I rise to discuss the question that has been assigned to me, "Agricultural

Education in Secondary Schools," especially as there are no agricultural schools in Canada.

In my ignorance of many of the grand educational features that exist in your land, I felt when I left Montreal that I had something good to tell you, but since my arrival in your great Southland I have seen Hampton Institute. My conceit of our educational institutions has vanished, and I shall return to my own country a wiser man. We have nothing to compare with Hampton. The Negro and Indian boys and girls in attendance there are getting a better training for their life work than the majority of our boys and girls are getting. The correlation of hand and head training is carried out so thoroughly there that I have no words of criticism whatever to offer. I said to myself this morning, "Why need I tell you about our methods when you have at your very doors such an institute as Hampton? At Hampton you can gather the very best ideas as to the place agriculture should occupy in the school course of studies."

I have listened with great interest to the papers and discussions of this Conference called to deliberate on matters pertaining to secondary education. I have heard the State Superintendents speak with intense earnestness on the best means of developing a system of high schools in their respective States; I have listened carefully to the remarks of the Presidents of the State Universities of the South on the relations of the higher institutions of learning to the high schools; to the Professors of Secondary Education on the scope of their work, and to Dr. Knapp and Mr. Crosby of the Department of Agriculture, Washington, on Agriculture in High Schools, and I am delighted with all I have heard. There remains for me in this discussion one important duty, as I conceive it, namely, to state our experience with High Schools in Canada, more especially in Ontario, and to point out the agencies that are operating to bring about the establishment of courses in Agriculture in our High Schools, in order that you may profit by our experiences. You are anxious, and it is desirable that you should make no false steps or mistakes in this great movement that is taking place in the South.

I have already stated that we have no Agricultural High Schools in Canada. We have, however, in Ontario over 150 well equipped high schools preparing pupils to become teachers and to enter the Universities. The majority of these schools were established about 35 years ago; the teachers are nearly all university graduates, and all have taken special courses in pedagogical methods and practice.

For many years we prided ourselves on our excellent system of high schools and the excellent instruction provided the students, for the primary or public school course led gradually up to the high school course and this in turn to the university. The Educational Chain was complete—without a missing link. We boasted that the child from the humblest home in the land could, if he so desired, pass into the university without difficulty, for fees are absent from most elementary high schools. Democracy had apparently achieved a great success. The Normal schools for professional training of teachers were kept full, and the University class-rooms overflowed with students sent up by the high schools.

This was the bright side of our school system; the other side had been overlooked by our educational leaders. The weak link in the chain was the high schools. There the pupil was practically compelled to take either the course for teachers or that leading to the university. (In many city schools commercial courses have been added in recent years.) The high school courses were therefore admirably adapted to those desiring to become teachers or university students, but they failed to meet the needs of the great majority of the pupils passing through the public schools. In other words, our high schools belonged to the classical type. As feeders to the university they were excellent, but as training agents for best service in life's duties of the boys and girls who did not care to take a university course they were failures. Many bright sons have been lost to the farms of Ontario through attendance at the high school. They desired simply to get a better education than was possible at the public schools as an equipment for their life work, but once within the walls of the high school they were compelled to "face about and march" for the college or university, for the course of studies gave them no alternative. I have no reference here to those farm boys who had no love for farm life and who wished to go into other professions. For such boys the courses were well adapted. It was comparatively easy for a boy aiming at a profession to get an education, but it was difficult for a farmer's boy to get his professional training, because there were no agricultural high schools that faced him toward the agricultural college. Our high schools trained the few and neglected the many.

Allow me to digress for a moment to discuss the needs of high schools, and the relationships they should bear to the elementary schools, although this latter point has been discussed somewhat fully by previous speakers. In most cases the secondary or high schools have not been closely related in the past to the public ele-

mentary schools. So long, of course, as the idea prevailed that it was not the duty of the State to provide an education for its people, high schools were comparatively few, and were supported by private or church funds. But with the growth of democratic ideas of equality the state assumed the control of the primary schools, and every child of the State could receive a free elementary education. This was one of the greatest advances in the history of education, and forms an epoch making event in the civilization of the world.

With the acceptance of the idea that the public schools are the charge of the State there developed among the better classes the other idea that high or secondary schools, which are after all supplementary to the elementary, should also be placed under State charge and made as free as possible. This idea has not been universally accepted, and there are many well meaning persons who state most emphatically that the child who desires something better than that which the public school can give him, should pay for that better education. But all arguments in favor of State-supported elementary schools hold true also for State supported High Schools. The net result is educated citizens with abilities for service enormously increased. Every department of modern life with its constant change in industrial conditions, due to new applications of science demands better training and greater adaptability on the part of every citizen, and no department requires greater training and adaptability than agriculture under modern conditions. Science has furnished an immense amount of usable information that has practically revolutionized the older methods of agriculture; and it is very important that the coming rural citizens should enter into the possession of this information with the ability to apply the new knowledge into new combinations, to realise quickly the bearing of new developments of knowledge upon customary ways of doing things and upon the probable demands for new kinds of service, and to reason clearly.

Besides a trained intelligence, the rural citizen should have a sympathetic interest in the world of nature around him; he should see something of the beauty of the web of life, and understand that his physical welfare depends largely upon his obedience to the laws of nature that he has tried to grasp.

More than these, the cultivators of the soil require training in organization and co-operation, for these spell success in agriculture as they do in other commercial lines. For ages the farmer did not feel much need for co-operation; he required little beyond his own farm; he was self-contained. His earnings were small in spite of

the hard work, and he had no desire to speculate, lest he lose his hard-earned money. He became independent, but his independence prevented him from getting all he could from his land. He shunned co-operation in matters of common interest to all his neighbors. The products of his farm went on the market alone, very frequently in inconvenient and unattractive forms. Latterly, however, through the general desire to have good roads, good local government, good schools and good churches, the spirit of co-operation is invading the communities.

In matters of modern co-operation power of organization is demanded, "which requires not only persistent application of the mind and habitual accuracy in details, but also a wide range of knowledge, the trained use of the imagination and readiness to work with other people."

This power of organization, so essential then to modern agricultural conditions, can be developed by properly conducted agricultural high schools, each one of which should be an "embryonic community of life, active in the type of occupations that reflect the life of the society outside." (Dewey, the School and Society.) Such a high school, when active occupations, elementary science and nature study predominate the curriculum, will stimulate the pupils to take a greater interest in rural life and will make them more adaptive to the changing conditions of modern life.

It is plain that as high schools are a necessity under modern conditions, they should be supplementary to the elementary schools and should continue the work of the latter, so as to prepare the pupil for the best service in his community. It is generally conceded now that the Nature Study method is the natural method of education and is better adapted than any other to the growing mind of the child, but as already hinted, it would be advisable to give the broad meaning to the term Nature Study, that is, the study of the child's environment, including the activities of the neighborhood.

It should be remembered that Nature Study is primarily a method of study. It is a means of development of mental power in the pupil under the careful guidance of the teacher, by encouraging close observation of the things of nature that lie about him, and by begetting an attitude of inquiry into their meaning so that the truth is discovered through the exercise of the child's own self activities. Nature study stands for the active pupil and the suggesting teacher. The good teacher will develop in the child a love for nature, which is an important result to be obtained. The

Nature Study movement includes the introduction of such active work as Manual Training and Domestic Science, representing as they do, "active, expressive and self directive factors." The newer education aims at the training of the whole child to take the highest part and lead its best life in the community.

When pupils shall have reached the high school the method of study developed by Nature Study will have become a habit and will have permeated also all the other subjects of their course. This is the scientific attitude, a spirit of search after truth through investigation, without prejudice.

In the high school, however, the subject matter becomes better related, and the treatment more systematic and logical, resulting in the formulation of laws and principles. Consequently more attention will be given there to elementary science and its applications than to nature study.

Many efforts have been made to improve our rural schools. The task is more difficult today than it has been for centuries, for "a vast body of knowledge has to be brought into educational account. The old tradition has to be examined, readjusted to new needs, and in part to be discarded." New studies have to be introduced, and scientific thought has to be given to the training of the senses and of the physique.

The ideal systems of schools for the rural districts would, in my judgment, be (1) the establishment of several centrally located agricultural high schools in every state, each equipped with one or more teachers on its staff trained in an agricultural college, acquainted with the practical side of agriculture, and able to use the farm in connection with the high schools as a good teacher uses his science laboratory to demonstrate in a practical way the best scientific principles and methods advocated by the Experiment Stations. These Schools would act as feeders for the agricultural college of the State. (2) A good consolidated school for the township where the first year of the high school would be connected in course with the elementary grade work. This secondary course would be adapted to the larger boys and girls, who spend most of their time on the farm, but who would be willing to spend two or three months of the year in a study of the activities of the district, for the purpose of the bettering of their knowledge of the farm processes and thereby gaining power for service. Good rural schools where nature study would form the basis of the school effort, as in the lower grades of the Consolidated School.

Such a system, I say, with the agricultural college at the apex,

with several agricultural high schools, a consolidated school in every township, doing continuation work of a secondary nature, and good smaller schools carrying on nature work by the Nature Study method, would be ideal; but the trouble with this scheme is the great cost, which would make it impracticable in most states. It is a matter of regret that there is such an aversion to paying taxes, even for such an excellent thing as good schools; but I suppose the people must be educated to pay taxes pleasantly. Tax-paying is co-operation for mutual benefit, and without taxes we would not be able to have good schools and churches, and most of our modern conveniences.

In Canada we have not yet reached the state of advancement when the people are a unit as to the importance of such a scheme of education and are willing to tax themselves for a system of schools such as I have indicated. Through the influence of two or three agencies, however, our rural people are beginning to realise the value of an agricultural education. They have been convinced by good object lessons. By continuing our good work we hope by and by to get our ideal system of schools. We consider it wiser to educate our people to a realization of the need of agricultural high schools so that they will voluntarily undertake the burden of taxation necessary for their establishment and maintenance, then to legislation ahead of public sentiment.

The first agency I shall note is the Ontario Agricultural College at Guelph, Ontario; established 32 years ago by an act of the legislature for the benefit of the farmers, it was for the first fifteen years disowned by the farmers themselves. It was a football for the contending political parties? Subjected, therefore, to severe gales of scrutiny and criticism it grew slowly, but its roots became firmly planted. For many years the members of the college staff remained at home, thinking they had done their whole duty when they gave instruction to the students who came to the class-rooms; but the farmer was not to be won over by that method. Then the staff went out to the farmers, talked with them, advised with them, and, by practical, sensible demonstrations won their confidence.

Thus arose our farmers' institutes, an extensive system of the Agricultural College, a means by which scientific knowledge was popularized and applied to practical agriculture. Side by side with the Farmers' Institutes were the Fruit Growers', the Live Stock, the Dairy, and the Poultry Associations, all encouraged and aided by the Agricultural College.

The farmers became interested in the improved methods of deal-

ing with the soil, plants and animals, and wanted to know more. They read the bulletins issued by the college, attended the short courses at the College arranged for their special benefit, and co-operated in the experimental work carried out under the direction of the College.

All this, it will be perceived, was along the line of educating the farmer to help himself. Then again, when we consider that for more than thirty years the Ontario Agricultural College has stood for a careful study of nature and nature's processes as an essential factor in successful agriculture, and has insisted that such a study is one of the very best foundations for general culture, we can understand how her graduates would form an influential body of men both able and willing to help along the movement for a better training for the farmer's boy.

The course at the agricultural college not only developed the intelligence, stimulated the imagination, widened the outlook and gave the students scientific, practical and sympathetic interest in the world about them, but it also gave them as free citizens of a rising nation, a greater interest in civic affairs and showed them the value of co-operation and collective action.

The second agency for the advancement of rural education is inseparably associated with the name of Dr. James W. Robertson, whom some of the members here met at Lexington, Ky., in the early part of this year. As Commissioner of Agriculture for Canada, Dr. Robertson began a series of illustration experiments to "help the farmer make more of himself and his farm." He organized a system of cold storage from the Creamery to the British market, with the result that the increase of butter exported was sixteen fold in eight years (1894 to 1902).

In Prince Edward Island particularly did Dr. Robertson show the value of co-operation and education in the manufacture of butter and cheese. In 1891 there was an output valued at $8448.00. In 1901 the value of the output was $566,824.00. A sixty-seven fold increase in ten years. In the provinces of Ontario and Quebec greatly increased returns were the result of the application of intelligent labor to the agricultural industries. In Ontario between 1894 and 1904 the value of the agricultural products for export doubled in value notwithstanding the fact that the number of farms and farmers remained nearly stationary.

Dr. Robertson's policy in all his efforts to make the farms more productive was "simply to break the way for new and vast interests

and then to withdraw in favor of the spirit of self help that they have aroused and directed."

While directing this movement of application of science, organization and co-operation to farm labor, Dr. Robertson was not forgetful of the boys and girls of the farm. He was planning a kind of school training in which the "duties of joys of the farm" would be emphasized. In this scheme he secures the co-operation of Sir William C. MacDonald, a millionaire merchant of Montreal, who supplied the funds.

To show the importance of planting selected seed in improving the crops, and to create an interest in this matter among the boys and girls, they established a seed grain competition. Prizes were offered to encourage the selection of the largest heads of the most vigorous plants, and growing seed from these heads on a plot by itself. "There was a yearly competition for every province, and a main competition extending over three years. Any boy or girl living on a Canadian farm who was under 18 years of age could enter the competition." Four hundred and eighty-five prizes were given in the yearly competition, of a total value of nearly $11,000.

Encouraged by the great interest shown in this work, they planned what is now known as the MacDonald Rural Schools' Movement. It had a three-fold object:

1. To show the value of consolidation of schools by the establishment of rural consolidated schools in each of the eastern provinces, well equipped with competent staffs for teaching along with the ordinary subjects, manual training and nature study, where school garden work is emphasized.

2. To train teachers in the new subject of Manual Training, Domestic Science and Nature Study. The MacDonald Institute of the Ontario Agricultural College is the training school of the teachers helped by the fund. In future the teachers will be trained at the MacDonald College, Ste. Anne de Bellevue, Quebec.

3. To provide school gardens at a group of five schools in each province, with a travelling instructor in charge of each group, he spending one day each week at each of the schools of the group, guiding both teacher and pupils.

The MacDonald movement in Canada is an effort to construct something better along educational lines than that which now exists in rural districts. "The movement has nothing destructive in it. It does not desire to destroy anything that now exists; but it hopes to construct something better and thereby replace what is

poor. It aims at helping the rural population to understand better what education is, and what it may do for them and their children.

The term of three years during which the fund agreed to maintain these agencies is now nearly over, and we are able to see the results as it were from the distance.

The results are:

1. A great interest has been aroused throughout Canada in the matter of education, more especially rural education, and more attention is now being given to the improvement of school grounds and buildings, to the better remuneration of teachers, and to the courses of study.

2. The leaders of education feel that they now have a strong backing of public opinion for the improvements they have in mind.

3. Nature Study (with the school garden), Manual Training and Domestic Science are subjects that vitalize and give interest to the work of the school. They relate the school to the home, remove the tendency of restlessness that prevails to an alarming extent in rural communities, furnish during the early years of the child "exercise through which he acquires unconsciously the taste and capacity for work," and also the mental attitude of inquiry into the meaning of things in the presence of the facts.

4. The rural population can be brought to appreciate good education whenever good illustrations are brought to their attention, and show that they appreciate it by increasing their school tax to maintain the new school. The rate payers of the consolidated schools have, during the last three years, seen visions that disturb contentment, and they will never be satisfied again with the old, poorly equipped school of pre-consolidation days.

The people naturally ask if by one man's work so much good can be done, how much good can the State do with its resources behind it?

The MacDonald movement is, in other words, a grand demonstration of the application of improved methods of education which our most advanced educators have visited, but which the State was not willing to adopt into its educational system on account of lack of public support.

It is the forerunner of a system of rural education, supported by public funds, that prepares the child for complete living on the farm.

On January 1st, 1905, Dr. Robertson resigned the position of Commissioner of Agriculture to devote his entire time and energy

to the carrying out of a still broader scheme of education for the betterment of the rural classes, viz., an Agricultural College and Teachers' Training School, to be known as the MacDonald College. The buildings are now well under way, and it is expected that class work will begin in September, 1907. The funds are generally provided by Sir William MacDonald for both the equipment and the maintenance of this great institution which aims to give the young men who attend a good sound practical education, an education which will equip them thoroughly for their life work; to give young women, farmers' daughters, as good a chance as the farmers' sons by a training in Household Science, and to train teachers for all the grades, so that they may direct the children under their charge to do those things that make life most worth living.

Shall Agriculture Be Taught in the Secondary Schools of the United States?

By DR. S. A. KNAPP, United States Bureau of Plant Industry, St. Charles, La.

The thoughtful people of our country have become alarmed at the rapid increase of municipal wealth as compared with that of the rural districts upon which they depend for support. It is not alone the aggregation of great wealth and population of a few chief centres of trade, but the rapid transfer of National influence and political power from the home making and liberty loving democracy of our rural domains to the centres of wealth, where the few are dominant. A large proportion of the vast wealth created annually from the soil, ultimately enriches the city, instead of developing and improving the resources of the country.

The enormous sums paid by the farmers for transportation and to other public utilities, for instance, of all kinds, for clothing and for manufactures, all find their way into city coffers and finally the moiety of money left the farmer from a year of toil is taken to a city bank and deposited for safe keeping. It is not, however, the rapid transfer of wealth from the country to the city that causes this great alarm; it is the almost universal removal of the leaders of men and the captains of industry from the country to the city.

This disorganizes and cripples the country, weakens its effective forces and lowers its civilization.

Realizing what must be the effect upon our national life if this is allowed to continue, patriotic men everywhere are attempting to provide a remedy. Just at present a remedy quite generally accepted is the giving of instruction in Agriculture in the Secondary schools. Let us weigh the reasons assigned for the addition of the study of Agriculture to the high school curriculum.

1st. It is claimed that instruction in agriculture will promote and possibly create a love for the soil and the things it produces, and give to the pupil a tendency to the life on the farm. There may be a little in this, but not much. All studies in the secondary schools are largely elementary, and are expected only to prepare the student for wider investigations in the future and are scarcely carried far enough to create tendencies.

If they give direction, as a whole they point so many different ways, that one counterbalances the other. A love for the soil is not created or enhanced by the study of a book on agriculture, or any pedagogic lessons in soil manipulation. It is founded on an intelligent and successful farm life and the environments of an orderly and thrifty country home. The pupil at this stage is not thinking about tendencies any more than the nursing child thinks about growing. He is simply developing.

The factors which determine our ultimate choice of farm life are rarely scholastic tendencies, but matter of fact business relations or opportunities. It is doubtful whether the knowledge acquired in the high schools would be an influential factor in determining the choice of a rural life, once in a thousand instances.

We are liable to the same erroneous conclusions here that were entertained towards agricultural colleges, and were influential in establishing them, to-wit., that they would lead to the choice of a rural occupation and promote a higher life upon the farm.

Agricultural colleges have done a great work and will ultimately become more useful to the world, but if they have been influential in directing the sons and daughters of the farmers to the farm or have exerted their educational forces to increase the number of practical farmers, it is not generally known. Even a bird has never whispered it. They have been some more potent than the universities in transferring bright young men from the farms to other vocations.

The second reason offered is that such instruction will make better and more successful farmers. Such assertions arise from a

complete misapprehension of what the science of agriculture is. It is entirely distinct from botany, chemistry and the sciences related to it. As a science it has to do with the organic conditions and manipulations of soils, how to find them with plant food and fertilizers; it deals with the propagation of plants and the best methods of promoting their growth, with the selection, preservation and germination of seeds, with pomology, entomology, and animal husbandry and kindred subjects. A man may be well versed in all the sciences that relate to agriculture and be master of the things I have enumerated as belonging to agriculture and yet be a failure as a farmer. There is a business side to farming, and it is the most important part—how to plan the work and use the labor and teams to the greatest profit, how to economize in purchases and improve the farm to advantage, balancing the productive and non-productive equations.

The schools unfortunately do not teach how to turn out at four in the morning and drive business relentlessly, till the dark calls to rest. The most failures in farming are on the business side and not on the scientific side. In the past three years I have been in close touch with over ten thousand of the best Southern farmers, and know the causes of their success on the farm.

The notedly superior and successful farmers are universally good business men, and generally graduates of the common schools. I do not recall a single graduate of an agricultural college or a university in the first rank.

The thoroughly trained business man, with tireless energy and habits of order and thrift, who has been raised on the farm, can upon return to it, acquire the sciences applicable to his profession much more readily than the college trained man, versed in science, can master the business side of agriculture.

Do not understand me as belittling the sciences or attempting to dwarf the advantages of college education. I am speaking only of the relative advantages of business training and habits, compared with scientific knowledge in promoting success upon the farm.

The average farmer does not keep any book account with his crops and does not know exactly where to place his losses or gains. In our co-operative demonstration work we require detailed crop accounts.

In the fall of 1905 one of our Texas co-operative farmers came to our Houston office greatly perplexed. He said to our Traveling Agent for his district: "I want you to go over my figures on my cotton crop. They show that I have cleared $19.50 per acre, above

all costs. This is impossible; there must be some mistake." When our agent had gone over the computation and assured him it was correct, he seemed greatly excited, and said: "Well, I am an idiot. I knew that I had made some money, but did not know just what crop made it. For two years I have been offered a quarter section of prairie land adjoining my farm for $15 per acre. Every acre of that land will produce a bale of cotton annually and I could pay for the farm out of the first crop and have money left. Why haven't I done it? Because I did not know how to figure. You have taught me and now I will buy. If you would not that farm will be sold before I get home," and he walked the floor in nervous anxiety till the train time. To-day he owns the farm and paid for it out of the profits on this season's crop.

The most gratifying feature of our Farmers' Co-operative Farm Demonstration Work is that wage-earners upon the farm have become scarce. Farm laborers are demanding a share of the crop and the share workers are quite generally buying farms and paying good prices.

This learning agriculture, which is a compound of the following ingredients—one-eighth science, three-eighths art and one-half business methods, out of a book—is like reading up on the hand saw and jack plane and hiring out for a carpenter.

A third reason is frequently given for teaching agriculture in the secondary schools, and this is that it will promote a wide diversification upon Southern farms and be the means of establishing profitable crop rotations, dairying and animal husbandry in general.

In cotton and rice the South has two of the most profitable crops in the world.

Our position is that it is better to go directly to the farmers and show them how to make maximum crops of these staples and still improve the fertility of their soil, than to attempt by an indirect process to influence them to diversify and go into lines of farming that will not pay half as well. I have hundreds of farmers who have cleared above all expenses over $40.00 per acre on cotton this season, and under boll weevil conditions. It is a little difficult to persuade these men to change their methods and go into a line of farming that at best will pay them only $5 to $7 per acre net.

It may be inferred from the foregoing that I am opposed to the teaching of agriculture in the schools. I am not; but most emphatically favor it to the extent that it can be taught successfully. I am opposed to faulty reasons for introducing it. There is one

reason that I accept, and it is sufficient, and that is some knowledge of agriculture belongs to the equipment essential to a reasonably broad education, even a common education. Botany and chemistry are taught in the secondary schools, not because the average pupil expects to be a botanist or chemist, or even to use them very much in practical life, but because they deal with the things about us, and explain them. Not to know something of these branches is to be considered ignorant.

Just so the domain with which agriculture deals is all about us. More than half our population reside in the country. The material of which our homes are constructed, our food and our clothing are all of country origin and related to agriculture.

Not to know something about the history and management of soils, plants and domestic animals is dense and unpardonable ignorance. Agriculture ranks with algebra and geometry, with geography, history and the sciences as among the common things that ought to be known as far as they can be through the limited instruction given in the secondary schools; and in my opinion agriculture is the most practical and important of all the branches with which I have above grouped it.

Is it quite fair to the youth, who must live and climb by toil, to leave out of their equipment for life's work the knowledge of how to do things, especially how to manage that complicated machine known as a farm? As a part of mental discipline should not the ability to do things be trained and strengthened in connection with the capacity to think things, so that the things thought may have a material life, and is not such training of signal value?

The only question to be considered, then, is to what extent can it be practically or profitably taught in the secondary schools? Second, how can it be safely injected into an overcrowded curriculum without doing injury to the other important branches of learning? A common mistake will be in attempts to do too much.

A few weeks since the President of a school board in an important interior city called me in conference to discuss a course in agriculture for the high schools of his city. He outlined his tentative plans as followe: Give a full course of instruction in practical agriculture, horticulture and animal husbandry. For laboratory work he would purchase a farm of from 50 to 100 acres adjacent to the city, lay out the farming lands into plats and small fields for tillage; purchase a small herd of choice animals, representative of the different breeds, and have swine, sheep and poultry departments. Do you know anything about stock? I asked.

He replied in the negative. Have you any live stock experts among your teachers? He answered "no." Then eliminate animal industry from your course. It would be a failure even if you had experts, for you could not keep them and handle them in a practical way, and hence all your teaching and demonstration would lead to error. Eliminate also general farming, because this is largely made up of economic practices, which lead to certain results. A town farm, and especially a farm owned by the public, can never be economic. It might be healthful because the public would laugh at it. A knowledge of how plants feed and grow, the effect of root and top pruning, what changes are brought about by deeper plowing and more frequent stirring of the soil, the amount of moisture it should contain and the effect of increase of temperature; the depth at which various seeds should be planted and cultivated to secure the best results of practical information about plants, their profitable productive and economic uses could be imparted. Soil exhaustion, the use of winter cover crops, the effect of crop rotation, the advantage of using manures and fertilizers could easily be brought into the lines of investigation.

The birds, the animal and the insect paste of the barn should be given attention. The common woods of the country and their economic uses, and the different methods of preserving them should have a place in the secondary studies. Closely allied to agriculture are some of the mechanic arts. Elementary training in the use of tools, and the construction of farm buildings is a strong factor in the successful farmer. If at such times as his farm work is not pressing he can make his improvements and construct buildings, it decreases expenses and improves efficiency. Much the larger part of our usable knowledge is acquired by indirection through the world's object lessons. If measured by their usefulness in life the most valuable half of our education is rarely touched in the school room for secondary education, to-wit., agriculture ,horticulture, farm mechanics and sciences and business methods as applied to the farm. The answer is, these things can be acquired at home. No. Under present conditions they can not be, and certainly they have not been and that is just what is troubling American farmers to-day. So history, mathematics and sciences might be taught at home. They are not, because at the majority of homes they are not understood. It is equally true that at most of farm homes the industrial and economic sciences necessary to the farmer are not understood.

Agriculture in most sections consists simply in a series of motions

inherited from Adam. What has been stated in regard to the requirements for men, should be equally emphasized about those for women. No young woman is quite half educated who is not a postgraduate in household economy, especially in preparing the food needful for the farmer, in making and repairing the clothing, in the orderly arrangement of the household, in the laws of health and care of the sick, in the management of the domestic fowls and in the knowledge of the trees and plants required for useful or ornamental purposes. These ought to be acquired at home, but they are not and at most homes can not be in a high degree. Shall the young men and young women go out into life half educated and half equipped for duty?

The paramount question is, How can so many branches be thrust into the curriculum of the secondary schools? Can any that are now accepted and in place be eliminated? If the secondary schools are to remain the great training schools for elementary teachers and to prepare the large majority of men and women for the various vocations of life, then the curriculum should rather be strengthened than weakened in every division. There is no room in the schools of elementary equipment, and if there was, the pupils are scarcely prepared to acquire agriculture and the teachers are not equipped to impart the instruction.

If there is not time for agriculture in the secondary schools as at present organized, and no material reduction can be made in the time devoted to the present lines of study, what can be done? I suggest the following plan for consideration: Increase the period for holding the school one hour daily, and devote this hour and a half a day on Saturday to agriculture and kindred studies not now taught. At once I hear the objections that the teachers and pupils are taxed to their full capacity at present. Allow me to explain: There should be no books in this added work. All the knowledge should filter into the pupil by absorption, through object and doing lessons in the open air; hence, they should be restful and invigorating. It is too common an American opinion that restful exercises consist in engaging in some physical folly that has no useful purpose. All such theories have their baneful effect on American character. Manly exercises without useful accomplishment is like the art of talking without meaning anything. All manly exercises should have a definite purpose and accomplish something useful to the world.

An hour devoted to agriculture in a field laboratory after a day in the school room would be restful as well as instructive. During

the day these field lessons should be prepared by the instructors in agriculture, just as the apparatus is prepared and the problems assigned for the day to each student in a chemical laboratory. Some pupils would work with the soil to determine the relative value of deep and shallow tillage and the percentage of gain, by frequent and thorough cultivation; others would deal with moisture in the soil, and note the effect on plants from insufficient, sufficient and superabundant moisture, the effect of temperature in soils or of fertilizers upon the soils and how to apply them; the propagation of good seeds, their preservation and their value in the crop. There are almost endless problems along this line, all of which stand for millions of loss or gains to the farmers. How plants feed and how plants grow furnish many lessons; what effect root pruning has upon the top or top pruning upon the root; what causes them to sulk and pout, or turn pale and refuse to grow.

Others spend the hour among the flowering plants and shrubs, and learn what marvels of beauty can emanate from shrunken seeds; others are among the plants and trees that yield the luscious fruits, and still others are busy with the forest trees that furnish the useful woods. In cold or stormy weather the shops should be open with simple tools and lessons in their use. For the girls there should be an opportunity to acquire some knowledge of housekeeping and all the things that can be transferred to the home to elevate it and make life more enjoyable. There is nothing new in these suggestions. Hundreds have made the same before. Where we differ is that they end in these instructions with the lesson book and object lessons. These are not sufficient. Agriculture can not be acquired from a book nor from object lessons. These may be illustrative and helpful, but are insufficient. Instead of object lessons where the teacher demonstrates and explains, there must be doing lessons where the pupil demonstrates by his own labor.

Instead of plats a few feet square, these plats should be small fields, each boy owning and working one just large enough to illustrate all the problems, but not so large but what he can work it easily and thoroughly. Let each pupil understand that whatever is produced upon his little farm belongs to him and he can sell it whenever it matures. Furnish the boys excellent seeds, such as their parents will desire for planting on the farm. Encourage the girls to transfer the choice plants to their homes to beautify them. In the rural towns I am in favor of increasing the school hours upon the above plans. Town leisure for boys and girls is doing more to undermine the youth of the land than any other single cause. In

the rural districts it may not be practicable to increase the hours; if not, reduce the hours for other branches and substitute practical studies. Give the pupils an opportunity to absorb something useful instead of an absorption of the vicious that is now going on. I am a strong believer in education by absorption, but the environments must be adjusted, so that contact is had with the pure and the useful and the needful for uplifting. Our schools have not gone far enough in the villages and minor cities, where the environment for youth is worse than in the large cities. In the towns eight hours are taken for sleep, eight hours for schools and eight hours for environment instruction. What is this environment instruction? In the main it is the game, the streets, the saloons and the occasional daily paper—nothing practical, nothing useful. Good people have been trying to remedy this by establishing high-grade reading rooms and Young Men's Christian Associations. These are paliative, but not remedial. There is the same taint of viciousness about them, for they promote idleness, when the chief cause of wrong doing is idleness. An idle saint only differs from an idle sinner in a coat of paint and direction. He does not harm, but is full of the virus of nearly all wrong doing, idleness, and the time is liable to come when the direction will be mistaken or forgotten and the natural rottenness of leisure will have its sway. Abolish idleness, and we have struck at the root of vice. Every man should be employed. The idle should be treated as criminals. Every woman should have full occupation, and every child over six years old should have a little work in proportion to his strength, and all labor should be of the useful kind and helpful to the family, or the community, or the world. I see about the towns boys 16 to 18 years old who know nothing of plants or tools and have never done a real day's work. It was not thus in the older times.

Secondary schools should immediately prepare to instruct in the common and useful things of life, with the intent to impart knowledge, inspire a love of industry and lessen the hours of idleness with the added object of making men with sinews of steel and of pure and masterful character.

In the country, some modification of our common school system in the South is imperatively necessary, owing to the two races. The township graded school must take the place of the present scattered and unsatisfactory district school. With this change it will be possible to establish a secondary high school in the country; and if farm boys are to be retained in the country and follow the life of farmers, their education should begin and terminate in the country,

and they should never be subjected to the influences of town life. Country high schools will be an important factor in this great work.

On the farms we are not confronted with eight hours of idleness. The demonstration plats at the schools can be smaller, for country pupils may have their main demonstration plats at home, which should be regularly inspected by the teacher.

The lessons in domestic science should be such as are directly applicable to the farm; the better home should be the farm home; the better cooking should be the simple, homely but nourishing dishes of the farm. I recall an instance where an effort was made years since to establish a school of domestic economy in connection with an agricultural college. The lady in charge made a preliminary report, by items, showing that it would be necessary to expend twelve hundred dollars for kitchen equipments. The simple foods she expected to prepare to demonstrate her work could only be afforded by the rich, and if eaten regularly would kill a bear. Plain, sensible women who understand the requirements of rural homes, should be placed in charge of domestic economy instruction. Such a woman in every township could be of infinite help to the people. While she lectures to the pupils about foods and clothing and the laws of health, she could be means of infinite good to the farm homes by suggestion and direction.

It may be objected that this plan can not be put into execution for the reasons: First, the teachers qualified for such instruction can not be found. They never will be found till there is a definite demand made for them. The agricultural colleges are well equipped for such works. Our people would easily meet this emergency. Second, it is too expensive. If the district schools were all consolidated into a township school, a teacher for practical agriculture and farm mechanics, and one for household sciences could be added without increasing the present taxation. Third, the people do not want it. They would not listen to lessons in school house cooking and receipts for caring for a family.

They will give heed if anything is offered worthy of attention. The farmers of the South have in the main held to the farm methods of past centuries, without progress and with slight variation.

The Mexican boll weevil came and many of the best planters in the South predicted the speedy ruin of the cotton industry. Three years since, the United States Bureau of Plant Industry opened a campaign to make cotton despite the ravages of the weevil. The farmers gave heed and this year Texas has made the largest crop of

cotton in her history with countless boll weevils present in nearly every county.

A single instance to illustrate. Last month the citizens of Smith County, Texas, invited me to address a meeting of farmers at Tyler, the county seat. At the close of the meeting a business session was called and a unanimous request was made for more work. They wanted 150 demonstration farms and one seed farm established in that county. When told that we had no funds for such intensive work, they subscribed the amount required in fifteen minutes, and the work was commenced the next day. It has now proceeded so far that without question two seed farms and 200 demonstration farms will be established within the next thirty days in Smith County. Already men who had offered their farms for sale have withdrawn them and propose to hold and improve them. They believe lands are more valuable among such people, and they are.

To review: It is my judgment that if agriculture should be added to the curriculum of the secondary schools in the text-book form only, it would be more injurious than beneficial.

2. That if taught by object lessons solely, the advantages would be very slight.

3. That if taught by demonstration, each pupil being the demonstrator and working out the problems on a little farm under his exclusive control, rewarded by the success and the sale of the proceeds, it would be of great value.

4. An opportunity should be afforded for learning how to use tools, construct farm buildings and repair machinery.

5. Equal facilities should be afforded girls in the lines that will fit them to take charge of a household.

6. Every lesson taught in the school should be immediately applied to the farm and the home.

Upon the revival of letters, at the close of the dark ages, it was thought that education was for the few and should be limited mainly to the classics, mathematics and logic. It required centuries before modern languages and sciences were admitted upon an equality and schools made the rightful heritage of all.

Now the battle is for a recognition of industrial education in the people's schools.

The final reason I offer for its admission is that it is a national necessity. The great battles of the future will be industrial battles. England, Germany, France, Japan and the United States are putting forth every effort to gain industrial advantage.

At present the other nations excel us in industry; we are superior in inventive genius and machinery. When our machinery is combined with their superior industry, what then? Recently there was some discussion about the armies and navy of Japan. I have no fear of Japan equipped for war; but I do fear industrial Japan, where every child is a natural mechanic and farmer and delights in toil. Where every woman is personified skill and every man a past master of industry. To-day they are poor; in a generation they will be rich and dominate the trade of the Orient. If by any process of training, it matters not how costly, we could implant in the American youth a universal love of industry and a universal knowledge of agriculture and the mechanical arts, they would blend with our native genius, skill and ability to do masterful things, and Americans would become the industrial arbiters of the world.

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Tenth Annual Conference For Education in the South.

According to an announcment already made by the Chairman of the Executive Committee, the Conference will meet at the Carolina Hotel, Pinehurst, North Carolina, on the morning of Tuesday, April 9th, at 10 o'clock, and will continue through the following Wednesday and Thursday, closing on the night of Thursday, April 11th.

At a recent meeting of the Executive Committee and other officers of the Conference in Atlanta, it was decided to follow the advice frequently given by many who are greatly interested in its work, and for this year the meetings are to be held at a retired place having accommodation for all who may desire to attend, the purpose being to secure actual conference upon the various methods employed for the promotion of public education in the several States.

The place chosen is in the State of North Carolina where, at the Winston-Salem Conference in 1901, these meetings first began to attract the interest of all parts of the South. Pinehurst is central and easy of access to those who have been present on former occasions and for the many others who have expressed a desire to attend.

The plan for the entertainment of all members of the Conference under one roof, will facilitate personal acquaintance and a free exchange of opinions on the many vital questions which especially interest those engaged in educational effort, and it is anticipated that the exercises in general will be more informal than they have been in previous Conferences.

It is impossible, at this date, to present a complete program, but among the features will be the following:

A statement of the history and meaning of the Conference and the Southern Education Board.

A discussion upon "Agriculture and the Southern Farmer," by Dr. S. A. Knapp, of Lake Charles, La., Mr. T. O. Sandy, of Farmville, Va., and Dr. L. H. Bailey, of Cornell University.

A discussion of "Woman's Work for Public Schools," with reports from women who have been foremost in the several States in organizing effort for school improvement.

A State Superintendents' meeting, with reports from the State Superintendents and from the Campaign Committee of the Southern Education Board.

A meeting in the interest of High Schools and Secondary Education, with reports from Dr. Bruce Payne, Prof. P. P. Claxton and Prof. W. H. Hand.

There will also be addresses by President Harry Pratt Judson, of Chicago University, and others who are eminent in the educational world.

The Southern Passenger Association offers the following rate on the railroads:

One first-class fare plus twenty-five (25) cents for the round trip (minimum fare 50 cents) from all points in the territory south of the Ohio and Potomac and east of the Mississippi rivers, including Washington, D. C., Cincinnati, O., Evansville, Ind., and Cairo, Ill. Tickets limited to continuous passage in each direction, will be sold April 7, 8 and 9, 1907, with limit good to leave Pinehurst returning not later than April 18, 1907.

On the Trunk Lines from New York, Buffalo, Pittsburg and intermediate points, tickets for the round trip to Pinehurst may be obtained for one and a third fare. Those purposing to go from north of the Potomac are advised to write for fuller particulars concerning rates to the "Secretary of the Southern Education Board," 784 Broadway, New York.

Full information may be obtained at local railway stations early in April.

The rate at the Carolina Hotel, at Pinehurst, where the Conference is to meet, will be $3.50 per day. Special arrangements may be made for room with bath at $4.50 per day.

All persons expecting to attend the Conference should communicate, as early as convenient, with Mr. H. W. Priest, manager, "The Carolina," Pinehurst, N. C.

The influence of the Conference for Education in the South has broadened and deepened with increasing power during the nine years of its life. The first three Convocations were held at Capon Springs, W. Va., the last six at Winston-Salem, N. C., Athens, Ga., Richmond, Va., Birmingham, Ala., Columbia, S. C., and Lexington, Ky. Its purpose is to spread the Gospel of Education for all the people. Its aim is not professional but popular. *All who sympathize with its general aims are welcome to its sessions.* The topics presented and discussed have a common interest for educators of every rank, trustees of educational corporations, public educational officials and legislators, and intelligent patriotic citizens.

Each locality that has entertained the Conference has derived a large benefit from its presence, many friends of education have found encouragement and sympathy in attendance upon its sessions and good fellowship has been created between people from widely separated sections of the country.

S. C. MITCHELL, Virginia,
W. H. HAND, South Carolina,
P. P. CLAXTON, Tennessee,
GEORGE J. RAMSEY, Kentucky,
HARRY HODGSON, Georgia,
SYDNEY J. BOWIE, Alabama,
PAUL H. SAUNDERS, Mississippi,
JAMES H. DILLARD, Louisiana,
JOHN H. HINEMON, Arkansas,
Executive Committee.

ROBERT C. OGDEN, New York, President,
CHARLES B. AYCOCK, North Carolina, Vice-President.
BENJAMIN J. BALDWIN, Alabama, Secretary.
WILLIAM A. BLAIR, North Carolina, Treasurer.

The Conference On Secondary Education in the South.

The second session of the Conference was held at the University of Virginia, November 22, 23, 24, 1906. The first session was held at the same place the previous year. Invitations to the meeting were sent to the Chancellors and Presidents of the State Universities, the State Superintendents of Education, the Professors of Secondary Education in the State Universities, the Heads of all the Colleges in Virginia, and a few specialists in Agriculture. President E. A. Alderman made the opening address of welcome.

The following topics formed the basis for the discussions:

1. In what definite ways may the U. S. Department of Education further the establishment of a system of public high schools, by Elmer E. Brown, U. S. Commissioner of Education. 2. In what definite ways may the State Department of Education develop a system of public high schools once established, by President J. W. Abercrombie, of Alabama. 3. The relations of higher institutions of learning to high schools, by Prof. Joseph S. Stewart, of University of Georgia. 4. What is the definite work of Professors of Secondary Education, by Dr. Wallace Buttrick, of the General Education Board, New York, and Dr. Bruce R. Payne, of University of Virginia. 5. The High School course of study: (a) Agriculture in the High School, by Dr. S. A. Knapp and Dr. D. T. Crosby, of the U. S. Department of Agriculture; (b) Sciences in High Schools, by President Francis P. Venable of the University, of North Carolina, and Brown Ayres, of University of Tennessee. 6. Agencies and methods of training high school teachers, by Professor P. P. Claxton, of University of Tennessee.

These conferences are held to stimulate united effort among all the forces for the development of public high schools in reach of all the people, and to bring into some kind of unity the high school standards in the several states of the South. The High School is now the weakest point of our educational system and these conferences must stimulate thought and activity among the school authorities. Already gratifying results come from South Carolina, Virginia, Georgia, Tennessee and Alabama in increased applications for secondary education, and the plans for accrediting the schools after examination is well begun. We give all of this issue to papers read at the Conference and commend most cheerfully the efforts now being made to develop and correlate our High Schools of the South.

The General Education Board has undertaken no more helpful work for the South than the aid now being given to a number of our states to maintain a Professor of Secondary Education. We hope the Board will soon be able to extend the work to all of the Southern States. The establishment of these lecture trips in all of our state universities will do more to systematize our college entrance requirements and high school curricula, to train teachers for high school positions, and to stimulate legislation for the development of high schools wherever needed than could thousands of dollars in gifts to individual schools.

Book Reviews.

Latin Exercise Book. By A. I. Dotey. New York: University Publishing Co. Part I, $0.25; parts II, III, IV, $0.20 each.

Many teachers, many methods. In this series of four note-books, Mr. Dotey has given to the world of teachers of high school Latin the scheme for thorough drill in Latin forms and syntax that he seems to have worked satisfactorily. Its practicability may appeal to some, and they may use it to good advantage; others, who have been getting the same results in a simpler way, will find this elaborate system of note-books a burden.

There is one note-book for each of the first four books of Caesar's *Gallic War*. The aim, as explained in the brief prefatory note, is two-fold: "First, to guide and help the pupil in the preparation of his lessons; second, to assist the teacher in securing definite recitations and systematic reviews." The plan for each lesson is divided into four parts: (1) *Suggestive Questions and Notes.* Comparatively few of these contain any direct information for the pupil; most of them are the very questions that the teacher will ask in the recitation period. Thus time is saved for the class; for, with the help of the text and the notes of his edition of Caesar, the pupil has his answers all ready, and his response is immediate. Memory is thus abundantly stimulated; but quick, reasoning judgment, the power of accurate and definite thinking on the spur of the moment, the development of which is one of the chief aims of Latin study, is likely to be neglected. (2) *Grammatical References.* For each lesson the pupil has to write down some thirty references from his Latin grammar, or otherwise explain as many constructions. That may be a very profitable exercise for the deficient one-fifth or one-sixth of the average class. But for the bright, capable

pupil to be compelled, after he reaches the third or fourth book of Caesar, to write down day after day the references or explanations of a direct object, an indirect object, an ablative of time, a predicate nominative, a subjunctive of purpose, infinitive, a complimentary, and thirty more of the same kind, and for the teacher to have to read that same stuff day after day, all that is sheer waste of good time and energy. (3) *Blank space* is provided, in which the pupil is to write down all the words he has had to look up in the vocabulary, with their meanings; this list he must commit to memory. Another column is reserved for notes which he may have occasion to take down in class. (4) Last of all, there is a space, properly headed, for the inflection of some word or words to be studied in advance, but written out during the recitation.

This is, in many ways, an admirable scheme and most elaborate. But the amount of labor involved on the part of both teacher and pupil is enormous. Just to test it, the present reviewer selected at random the lesson on III, 21-22. It required nearly forty-five minutes to read the lesson (with the review), answer the questions, write out the grammatical notes (40 in number), etc. The average high school boy could scarcely do it in three or four times forty-five minutes and would probably worry a good deal longer as to what *secturae* means here, if it does not mean *quarries*. And the overworked teacher with twenty-five to forty of these exercises to correct daily would find the task still more burdensome.

Probably no teacher of independence and initiative would choose to follow out this scheme literally. But any teacher of Latin would find in it much of helpful suggestion.

WALTER MILLER, Tulane University, La.

The Philosophy of Goethe's Faust. Thomas Davidson, Author of "The Philosophical System of Antonio Rasmini Serbati," "Rousseau and Education According to Nature," "The Parthenon Frieze, and Other Essays," etc. Edited by Charles M. Bakewell. Ginn & Co., Boston, 1906.

This little book of 156 pages is, the preface tells us, the publication in permanent form of six lectures on Goethe's Faust, delivered at Cambridge, Mass., in the winter of 1898. The author, Mr. Thomas Davidson, was all his life a close student of Goethe, especially of the Faust, which he claims to have read at least fifty times. As such he is entitled to a respectful hearing.

The work is a notable effort to grasp the inner meaning of the

great poem, and one of the most successful attempts that has yet been made to present to English readers in clear, succinct form the philosophical conception of life which Goethe has here given to the world. No one can lay it aside after perusal without a feeling of deep admiration for a mind like Goethe's, with its power to grasp all the issues of this complex life of ours and, by keen analysis, to discover at last the vital principle without which no spiritual immortality is possible.

Nor is it necessary to agree with all of Mr. Davidson's conclusions in order to feel that his interpretation gives one a clear understanding of the poem in its entirety. He forestalls criticism, it is true, by saying that persons who have only read a poem once or twice "are pretty sure to accuse the man who sees more than they do, of reading just that amount into the poem," but for all that there yet may be other notes than those Mr. Davidson has sounded.

He finds the keynote of Faust in the conflict between the two forces named for us by Matthew Arnold—Hebraism and Hellenism —both of which seek to dominate the soul of man, one by leading through intellectualism to its excess—rationalism, the other to materialism and moral anarchy by means of the pursuit of culture. While this is undoubtedly one thought which Goethe had in mind, for he has reasoned out to their ultimate conclusions all the forces which give rise to the Italian Renaissance and the German Reformation, it is yet not all of his thought. There is in Faust a still deeper well-spring of truth, and that is, in simple language, the fundamental struggle between good and evil in every soul, by means of which man either works out his own salvation, or is submerged and dies. This is the eternal truth underlying the struggle in the soul of Macbeth; depicted in "In Memoriam" and in the sagas as used by Richard Wagner in his great "Nieb elungen Lied;" pre-eminent in Dante's Divine Comedy and even in paintings like Raphael's Sistine Madonna where the superlative triumph of the good makes the picture great.

Every work of art, if it live at all, must be thus based upon that ultimate force which Matthew Arnold calls "The eternal something, not ourselves, which makes for righteousness." This it is in Faust, more than the mere effort of the individual to free himself from institutionalism, which places the poem in the front rank of the world's greatest productions. That Mr. Davidson himself dimly perceived this we recognize from many passages in the book, especially in the fourth lecture, "In Quest of the Highest Existence," and at the last in the "Redemption of Faust," where "Faust's eyes

have closed upon the narrow world of self, but have opened upon the great world of universal ends."

The description of the first part of Faust, with the account of his pathetic entanglement with Gretchen, is most satisfactory, but it is in the discussion of the highly allegorical and obscure second part that the chief value of the book lies. A fine contrast is here drawn between Hellenism, in which ugliness is sin, and Hebraism, in which failure to live up to the highest ideal is sin. The whole poem is epitomized as "the new gospel—the gospel of modern life," marking the transition from the mediaeval life of contemplation to the new one of activity for righteousness' sake.

The summing up in the last seven pages seems to have been added by another hand than Mr. Davidson's, since it differs in matter and form from the rest of the book, and the conclusion drawn from a certain passage earlier cited is quite opposite to the elucidation there given.

JEANETTE STERLING GREVE, Chattanooga, Tenn.

Literature and Life in School. By J. Rose Colby, Ph. D., Professor of Literature, Illinois State Normal University. Published by Houghton, Mifflin & Co., Boston, Mass.

This is a book about English. It seeks to be frankly and simply what its name declares—a book about literature and life in school. Since, in spite of all that has been said and done to foster the introduction of literature into secondary schools, it still is hardly more than a beggar at the doors of a great proportion of our elementary schools, it has seemed once more worth while to make a plea for its presence in school life from the first date to the last. As is true of any rational plea for the use of any subject in school, this plea is based on a consideration of the essential business of the school, of the essential need of children, of the real nature of the subject, and of its true, its proper work, consequent thereupon. The book further undertakes to suggest means that may be employed to secure to literature some measure of fulfillment of its proper function in the life of children. This includes a study both of the general character of the material to be used and of the method of handling the material. It does not undertake to lay down a set course, nor to suggest special devices for class work. Finally the book ventures a look ahead into high school and college and the life that lies beyond and outside of the classroom, to see how the

subject fares and should fare there, and to find justification in life itself for the nature of the plea it makes for the handling of literature in school.

CONTENTS.

I. The True Function of Literature.
II. Literature and the First Four Years of School Life.
III. Literature and the Second Four Years of School Life.
IV. Method of Handling Literature in School.
V. Literature and Life after the Elementary Years.

The lists are intended to make more specific the recommendations as to class and outside reading made in Chapters II, III and V. They include also some additional names and an occasional comment. These lists are inserted here to be easy of reference for those who may find them of convenience, and to be out of the way of such readers of the books as may prefer to make their own selections.

It will be seen that, not merely for the first four years but throughout, the lists include matter for outside reading not easily accessible to many pupils, and, because of the expense involved, wholly beyond the command of many schools, for general class use. I have, nevertheless, inserted them deliberately. Some of them teachers will have in their own libraries. Some of them may be found in public libraries, even in villages. And if school boards can be educated to see the needs of schools in their charge, they can be induced to put a bookcase in every schoolhouse, and gradually to put on its shelves a large part of the material suggested in these lists. It is with this in mind that the poems so freely recommended from less commonly accessible poets have been in the main restricted to such as are included in some half dozen anthologies of moderate cost for general readers or are published in very inexpensive form especially for schools.

Poems and Tales for the First Four Years, English Poetry, American Poetry.

For the Second Four Years, English and American Prose, English Poetry, American Poetry.

For the High School, English Poetry, English Prose, American Poetry, American Prose.

Dutton's World at Work Series. Edited by Samuel T. Dutton, Teachers College, Columbia University. American Book Company, New York, Cincinnati, and Chicago.

Fishing and Hunting. By Sarah M. Mott, Teacher in the Ethical

Culture School, New York City, and Maude Barrows Dutton. Cloth. 12mo, 127 pages, with illustrations. Price, 30 cents.

This series will describe the activities of the race through the several stages of culture from barbarism to civilization. At the same time it will devote its attention entirely to present day peoples living in widely separated parts of the world and typifying these various developments. The stories in the first volume, intended for second year pupils, relate to child life among the Eskimos, the Western Indians, the Filipinos, and the Alaskan Indians, bringing out in an entertaining manner many of the habits and customs of these primitive peoples. The hand work given at the end of the book is an important feature.

The stories in the second book, for third year reading, are about the Pueblo Indians, the Egyptians, the Navajo Indians, the Tibetans, the Cubans, the Norwegians, and the Swiss—people more advanced than those treated in the first volume. The tilling of the soil and the domestication of animals mark a higher stage of progress. In this way the young child perceives that the complex civilization of today has grown up from simple elementary beginnings. The hand work suggested is as interesting as it is educational. Both books are profusely and attractively illustrated from photographs.

The Rose Primer. By Edna Henry Lee Turpin. Cloth, square 8vo, 128 pages, with illustrations in colors and in black and white. Price, 30 cents. American Book Company, New York, Cincinnati, and Chicago.

This primer is distinguished by the small vocabulary of common words, the frequent reviews, the short sentences, the simple language and phonetic exercises, and the carefully graded and well-selcted subject matter. There are never more than two new words on a page, and only one hundred and ninety-eight in the book. These words are carefully repeated, most of them being used ten or more times. Every new word is given in both script and print, and there are frequent script exercises for tracing and copying. The sentences are short and simple, and the construction is varied as much as possible to avoid the formation of singsong and monotonous reading habits. The child, confronted by the least possible labor in word getting, can easily master these pages. On completing them he has acquired a small but serviceable vocabulary of common words, and can begin any well graded first reader with ease and intelligence. The subjects in this primer are those which appeal to the intelligent

interest of children. Here are described and discussed familiar objects, plants, and animals, the common amusements of boys and girls, and the everyday round of home and school life. The illustrations are attractive and helpful to the child.

Brooks & Hubbard's Composition-Rhetoric. By Stratton D. Brooks, Superintendent of Schools, Cleveland, Ohio, and Marrietta Hubbard, formerly of English Department, High School, La Salle, Illinois. Cloth, 12mo, 442 pages. Price, $1.00. American Book Company, New York, Cincinnati, and Chicago.

The fundamental aim of this volume is to enable pupils to express their thoughts freely, clearly, and forcibly. At the same time it will cultivate literary appreciation and develop some knowledge of rhetorical theory. The book is essentially modern and practical in its character. In Part One are given the elements of description, narration, exposition, and argument, together with special chapters on letter-writing and poetry. A more complete and comprehensive treatment of the four forms of discourse already discussed is furnished in Part Two. In each part there is presented a series of theorems covering these subjects, each theorem introducing a single new principle. The pupils are taught how to correct their own errors, and careful co-ordination with the study of literature and with other school studies distinguishes the book. The modern character of the illustrative extracts cannot fail to interest every pupil. An extensive appendix contains the elements of form, the figures of speech, etc. A complete index renders aid in ready reference.

Harkness, Kirtland & Williams' Cicero. Six Orations. Edited by Albert Harkness, Ph. D., LL. D., Professor Emeritus, Brown University. Assisted by J. C. Kirtland, Jr., Professor in Phillips Exeter Academy, and G. A. Williams, Ph. D., Professor in Kalamazoo College. Half leather, 12mo, 466 pages, with notes, vocabulary, and illustrations. Price, $1.00. American Book Company, New York, Cincinnati, and Chicago.

In this volume are given the four orations against Catiline, Archias, and the Manilian Law, which form the minimum requirements of the College Entrance Examination Board and of the New York State Education Department in this subject. The introduction gives an outline of the life of Cicero, of the history of Roman oratory, and of the public life of the Romans, with an account of

the magistrates, senate, popular assemblies, and courts of justice. The text is mainly that of C. F. W. Mueller, Leipzig, 1896. The notes are in keeping with modern methods of teaching, and have been prepared with a view to meeting the needs of both student and teacher. The vocabulary contains the primary meanings of words, and such special meanings as occur in the orations. Attention is paid particularly to etymology and to the significant elements of compound and derivative words. The illustrations are unusually choice.

Knight's Primer of Essentials in Grammar and Rhetoric. By Marietta Knight, English Department, South High School, Worcester, Mass. Cloth, 16mo, 64 pages. Price, 25 cents. American Book Company, New York, Cincinnati and Chicago.

This primer is the outcome of the need felt by many teachers in secondary schools for a concise and compact summary of the essentials of grammar and rhetoric. It is designed as a guide in review study of the ordinary text-books of grammar and rhetoric, or as an aid to teachers who dispense with such text-books; in either case it is assumed that abundant drill work has been provided by the teacher in connection with each subject treated. The work will also be found to harmonize well with the recommendations of the College Entrance Examination Board, which require that students should be familiar with the fundamental principles of grammar and rhetoric. Inasmuch as entrance examinations to colleges may include questions involving such essentials, it is important that the study of the latter should go hand in hand with that of the texts. For this purpose the present primer will be found admirably well adapted, especially in view of the fact that it is not burdened with many illustrations and comments which are of no value.

Leading Articles of Magazines.

LIPPINCOTT'S MAGAZINE, MARCH.

The Smuggler, Tybout; The Fighting Death, Comfort; The White Passion of the Sea, Stevens; The Convict Strain, Robinson; The Accomplished Mrs. Thompson, Richardson; Miss Merriam's Groom, Durant; The American Gentlemen, Antrim.

THE AMERICAN CHEMICAL JOURNAL, FEBRUARY AND MARCH.

The Absorption Spectra of Certain Salts in Aqueous Solution as Affected by the Presence of Certain Other Salts with Large Hydrating Power, Jones and Uhler.

THE AMERICAN BOTANIST, JANUARY.

Some Fruits from a Tropical Garden, Clute; Perusin' the "Pennyrile" Country, Price; An August Outing, Dobbin; The Baobab, Bailey; Natural History or Life?

THE CHAUTAUQUAN.

February. A Reading Journey in the Heart of England, Stanley; Effects of Stage Conditions on Shakespeare's Method; Work of the London County Council; The Lincoln Mark; The Vesper Hour, Library Shelf, Representative English Paintings.

March. A Reading Journey to Oxford; Burne-Jones and the Pre-Raphaelites; Augustine Birrell; The Garden City Movement; Memory Kodaks of England.

SCRIBNER'S MAGAZINE, MARCH.

Down the Seine in a Motor Boat, Peixotto; The Fruit of the Tree, Wharton; The Last Ghost in Harmony, Lloyd; Impressions of Contemporary France, Wendell; The Disciplining of Peter, Moody; The Passing of a Wilderness, Dimock; The Situation in Manchuria, Millard.

EVERYBODY'S MAGAZINE.

February. Our Industrial Juggernaut, Reeve; Professor Malmo, Irwin; Dollars vs. Pedigree, Baker; Semi-Tropical California, Bailey; In Bohemia, Vorse; Georges Clemenceau, Prime Minister of France, Fullerton; The Opera, Henderson; An Envoy of the Higher Civilization, Little; The Autobiography of a Business Man.

March. The Adventurer, Osbourne; The Gentleman Burglar, Brainerd; The "Shadow" in High Finance, Ferguson; The Needless Slaughter by Street Cars, Fox; The Air Fight, Robertson; The Marriage Charm, Woodrow; The Players; The World's Half-Citizens, Dunbar.

POPULAR ASTRONOMY.

February. The Observations of Scotland, Macpherson; Recent Progress in the Measurement and Reduction of Radial Velocity Spectrograms, Curtiss; Astronomy of the Present Time, Payne; Concerning the Constitution of the Ether, Luigi d'Auria.

March. Transmission of Time, Klotz; The Method of Using Professor Newcomb's Tables of the Planets, Buchanan; Miss Agnes Mary Clerke-Macpherson, Jr.; April Meteors, Denning; Telescope Meteors, Denning; Photographs of Faint Stars, Pickering; Problems of Solar Physics, Cortis.

THE ALIENIST AND NEUROLOGIST, FEBRUARY.

Some Psychological Studies of Man's Moral Evolution, Ashmead; Neurones in the Light of Our Present Knowledge, Collins and Zabriskie; Alcohol in Therapeutics, Hughes; Recurrent Functional as Distinguished from the Typical Organic Dementia Senilis of the Literature, Hughes.

NEW ENGLAND MAGAZINE.

February. At the Nation's Capital, Barry; Dangers in our Educational System, Hall; Old Time New England Scenery; A Singer of Southcreek, Cameron; Nineteenth Century Boston Journalism, Clement; The Connecticut Navy of the American Revolution, Paullin; Concerning Home and School, Arnold; Massachusetts Railroad Commission, Burrows.

March. Uncle Primus Tells a Ghost Story, Bouve; Old Time New England Scenery; Ballade of the Woods on a Winter Night, Palnam; Nineteenth Century Boston Journalism, Clement; American Shipping and Pending Shipping Legislation, Rice; A Massachusetts Crisis, Bridgman; An Arduous Outing, Blanchurd; The Little Gray Owl, Dolson; Concerning Home and School, Arnold.

THE CANADIAN ENTOMOLOGIST, JANUARY.

New Species of North American Lepidoptera, Barnes; Insects as the Food of Squirrels, Davis; A Ferocious Water-bug, Harvey; Preoccupied Names of Bees, Crawford; Notes on the Swarming of a Species of Crane, Fly, Ainslie.

THE JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS.

November 22. A problem of Evidence in Radical Empiricism, Pitkin; Unity and the World Ground, Farley; The Mad Absolute, James; Reviews and Abstracts of Literature.

January 31. Pragmatism as the Salvation from Philosophic Doubt, Russell; The Sixth Annual Meeting of the American Philosophical Association; Section of Anthropology and Psychology of the New York Academy of Sciences, Woodworth; Reviews and Abstracts of Literature; Journals and New Books.

March 14. Pragmatism's Conception of Truth, James; The Classification of the Virtues, Wright; Reviews and Abstracts of Literature; Journals and New Books.

THE ATLANTIC MONTHLY.

February. The Spirit of the Old West Point, Schaff; The American Consul and American Trade, Osborne; Shakespeare of Warwickshire, Munger; The Helpmate, Sinclair; Evangeline and the Real Acadians; MacMechan; The Problem of the Southern Cotton Mill, Bacon; A Motor-Flight Through France, Wharton; Browning's Lineage, VanDyke; Recent Socialist Literature, Brooks.

March. Longfellow, Aldrich; The Statesmanship of Cavour, White; The Spirit of Old West Point, Schaff; The Melodrama, Smith; Efficiency in Making Requests, Allen; Landless Men, Johnson; The Year in Mexico, Guernsey; The Helpmate, Sinclair; The Centenary of Longfellow, Perry; Modern Spanish Fiction, Comfort; Society and Solitude, Benson; The Study of National Culture, Francke; Some Books of Travel, Preston.

THE BANKERS' MAGAZINE, FEBRUARY.

Farm Mortgage Loans as Investments, Van Dusen; Banking and Commercial Losses, Hague; Trust Companies, The Savings Department, Herrick; Increasing a Bank's Business, Griffith; Canadian Banking Commerce, Eckhardt; Bank Audits, Reihl; Banking and Commercial Law; Banking Publicity.

THE ECLECTIC MAGAZINE, MARCH.

Jamestown, a Militant Birthday, Harrington; The Messianic Idea in Virgil, Conway; The British Protectorate in East Africa, Hilldlip; The Hohenlohe Memoirs, Blennerhassett; The Counsels, Marshall; The Pope and France, Ward; The Temple of Ten Thousand Gods, Salis-Schwabe.

THE TECHNICAL WORLD MAGAZINE.

March. Dwarfs Niagara's Power, Fitzgerald; For of Such is the Kingdom of Heaven, Beebe; Rediscovered Texas, Crissey; Wireless Control of

Mechanisms, Gradenwitz; The Blood, Price of Progress, Walsh; In the Track of the Hurricane, Dodge; Mailing a Newspaper, King; Science and Invention.

April. To Unite a Hundred Rivers, Briggs; Farmer Fears Weeds no Longer, Wood-Simmons; How Railroad Wreckers Work, Lawrence; To Save the World from Famine, Talbot; Last Days of the Fur-Seal, McGrath; Cutting Steel by Electricity, Baltimore; Prairies Spout Great Riches, Harper; Conspiracy Against the Children, Beebe; Plants Under Acetylene Sunshine, Walsh; Orations Heard Ten Miles, Hodge; New Army Pistol that Loads Itself, Franklin; No Alcohol Power for the Farmer, Hunting.

THE BUSINESS WORLD.

January. Income Tax Decisions of 1895; Tobacco Trust and the Consumer; Importance of the Retail Trade; How the Accountant Traces Stolen Funds; How Fire Insurance Rates are Made; Accountancy in Pennsylvania.

February. Manipulating Stocks in the Curb Market; Is There a Fire Insurance Trust?; The Tobacco Trust and Tobacco Grower; Handling of Inventories.

THE WORLD OF TODAY.

February. Can China Fight?, Lea; The Makers of New China, Griffis; The Conquering Motor-Car, Beecroft; The Elevated Railwa yand Civic Beauty, Moses; The Young Man in Politics, Becker; New China, Millard; Remaking the Senate, Moorehead; Mrs. Eddy from Christian Science Point of View, Burnham.

March. The Block System and Railway Accidents, Willey; The Triumph of the Kaiser, Ogg; The Revolution in Poland, D'Heautreave; Taming the Mississippi, Tait; From Saddle to Senate, Cowdrick.

THE POPULAR SCIENCE MONTHLY.

February. Professor Edward L. Nichols; Glacial Erosion in Alaska, Tarr; The Relation of School Organization to Instruction, Jackman; In Search of Truth, Jordan; Is Man an Automaton, Fullerton; A Vocabulary Test, Kirkpatrick; Magical Medical Practice in South Carolina, Hawkins; The Value of Science, Poincare; The Progress of Science.

March. A Defense of Pragmatism, James; The Century Plant and Some Other Plants of the Dry Country, Trelease; Notes on the Development of Telephone Service, DeLand; Denatured Alcohol, Bigelow; Spelling Reform and the Conservation of Energy, Stevens; Fritz Schaudinn, Montgomery; The Value of Science; The Progress of Science.

POLITICAL SCIENCE QUARTERLY, MARCH.

British Colonial Policy, 1754-1765, Beer; The Alien Contract Labor Law, Orth; The Variability of Wages, Moore; Inflation and Prices, Howard; The Concentration of German Banking, Schumacher; The Philippines and the Filipinos.

HEALTH-CULTURE.

January. Winter Vacations in Florida, Turner; Rolling as an Exercise, Latson; Sleep in Childhood; Modern Views of Digeston, Paulson; Dietetic Don'ts and Whys, Colman; Health Culture in New York Public Schools, Turner.

February. Pneumonia: tIs Causation, Nature, Prevention and Treatment, Latson; Boxing the Ideal Exercise, Latson; Acquiring Grace, Bond; What Our Boys Need, Rew; Vegetarianism, Child; Sense and Nonsense in Dietetics, Allen; Maintaining Heat of the Body in Cold Weather.

MODERN LANGUAGE NOTES.

February. The Concordance Society, Cook; Ancient Words with Living cognates, Fay; Some Faustus Notes, Richards; Spencer's Ruins of Time-Buck; Two Notes on Dante, Benham; Samson Agonistes, Tupper; Two

Chaucer rCuces, Hammond; A Rare Collection of Spanish Entremeses, Crawford; Ferdinand Brunetiere, Schinz.

March. Browning's Dramas, Sparrow; Edgar Poe et Alfred de Musset, Doubodout; Beaumont and Fletcher and the Mirrour of Knighthood, De Perott; On the Inflection of the Old-English Long-Stemmed Adjective, Shearin; Notes on the New England Short "o," Collester; A Glance at Wordsworth's Reading, Cooper.

THE METAPHYSICAL MAGAZINE, MARCH.

Zoroaster, Wilder; Mental Indolence, Cumming; Fiat Lux, Best; A Story of After Life, Gibson; Life's Current, Brown; The Cynic, Chesley; The World of Thought.

THE NATIONAL GEOGRAPHIC MAGAZINE.

January. Aerial Locomotion, Bell; The New Inland Sea, Davis; Honors to Peary; An Awkward Continent to the South of Us, Root; Fighting the Polar Ice.

February. Beautiful Ecuador, Lee; Persia, Past and Present; The Burning and Bathing Ghats of India, Scidmore; How Long Will Our Coal Reserves Last?, Campbell; Polar Photography, Fiala.

CHILD LABOR, JANUARY.

Poverty and Parental Dependence as an Obstacle to Child Labor Reform, Folks; The Awakening of the South Against Child Labor, McKelway; Some of the Ultimate Physical Effects of Premature Toil, Freiberg; Child Labor in the Soft Coal Mines, Lovejoy; The Extent of Child Labor in the Anthracite Coal Industry, Lovejoy; Obstacles to the Enforcement of Child Labor Legislation, Kelley; National Protection for Children, Addams; The Child Labor Laws of the Ohio Valley, Morgan; The Child Labor Situation in Ohio and Border States, Miller; Children in the Glass Works of Illinois, Ven der Vaart; Child Labor and the Public Schools, Schaeffer; The Value of Publicity in Reform, Vance; The Enforcement of Child Labor Legislation in Illinois, Davies; Child Labor and the Public Schools, Lindsay; Child Labor in the Public Schools, Dabney; Child Labor and the Nation, Beveridge; The Difficulties of a Factory Inspectory, Davies; The Enforcement of Child Labor Legislation, Cadwallader; The Attitude of Society Toward the Child as an Index of Civilization, Adler; Reports from State and Local Child Labor Committees and Consumers' Leagues; The Struggle Against Preventable Diseases, A Symposium; Book Department; Department of Social Work.

Southern Educational Review

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LELAND STANFORD JUNIOR UNIVERSITY.

EDITED BY

H. ELMER BIERLY

APRIL-MAY, JUNE-JULY, 1907

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THE FOLLOWING ARTICLES WILL APPEAR IN FORTHCOMING ISSUES OF THE EDUCATIONAL REVIEW.

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Industrial Education in a Prairie State, Chancellor E. Benjamin Andrews, University of Nebraska; An Alabama Interpretation of the Work at Tuskegee, President John W. Abercrombie, University of Alabama; Education in a Democracy, Hon. Joseph W. Folk, Governor of Missouri; The New Commissioner of Education, Professor Walter Miller, Tulane University; The Functions and Relations of State Universities, President D. B. Purinton, University of West Virginia; The Achievement of a Generation, President E. A. Alderman, University of Virginia; The Ideals of a University, President L. Hulley, Stetson University, Florida; What Should Be Done by the Colleges and Universities for the Religious Training of Students, Professor Edwin Mims, Trinity College, N. C.; Social Life in College, Professor St. George L. Sioussat, University of the South, Tennessee; The Place of the Agricultural and Mechanical College in the Educational Scheme of the South, President Brown Ayres, University of Tennessee.

School Supervision.

Annual Addrsses, Superintendent J. M. Greenwood, Kansas City; Suggestions for the Improvement of the Study Period, Professor F. M. McMurry, Columbia University; School Room Aids and Devices, Superintendent Lawton B. Evans, Augusta, Ga.; The Effect of Moral Education in the Public Schools Upon the Civic Life of the Community, President W. O. Thompson, Ohio State University; The Moral Training of a Child, Hon. N. C. Schaeffer, State Superintendent of Pennsylvania; Some Phases of the Internal Organization of State Normal Schools, President R. N. Roark, East Kentucky State Normal; The Best Means and Methods of Improving Teachers Already in Service, Superintendent W. McKendree Vance, Miamisburg, Ohio; Annual Official Reports of Educational Progress for Each Year, by the Southern State Superintendents; The Introduction of Manual Training in City Schools, Superintendent C. B. Gibson, Columbus, Ga.; The South's Need of Industrial Training in High Schools, Superintendent J. W. Kuykendall, Fort Smith, Ark.; The Fourth Profession, President James E. Ament, State Normal School, Warrensburg, Mo.; Manual Arts in Rural Schools, Professor F. J. Orr, Georgia State Normal; Means Afforded by the Public Schools for Moral and Religious Training, Superintendent T. A. Mott, Richmond, Ind.; Practical Child Study in the Elementary Schools, Miss E. M. Haley, State Normal and Industrial School, Alabama; How to Afford City Children the Advantages of a Country Environment, Superintendent E. H. Mark, Louisville, Ky.; The Course of Study for City Schools, Superintendent R. J. Tighe, Asheville, N. C.; Compulsory Education, President Andrew Sledd, University of the State of Florida; The Training of Teachers in the Local Training School, Superintendent J. H. Phillips, Birmingham, Ala.; The County Superintendent and His Mission, Superintendent J. N. Powers, West Point, Miss.; The County Superintendent in the School Room, Hon. M. Bates Stephens, State Superintendent of Maryland; A Qualified Teaching Force, Professor E. F. Buchner, University of Alabama.

Secondary Education.

In What Definite Ways May the State Department of Education Further the Establishment of a System of Public High Schools, Hon. Elmer Ellsworth Brown, U. S. Commissioner of Education; The Relation of the University to the High Schools, President D. F. Houston, University of Texas; The Relation of the Higher Institutions to the Secondary Schools, Professor Joseph S. Stewart, University of Georgia; Shall Agriculture Be Taught in the Secondary Schools of the United States, Dr. S. A. Knapp, U. S. Bureau of Plant Industry, Louisiana; Agricultural Education in Secondary Schools, Professor W. Lochead, MacDonald College, Canada; Agriculture in High Schools, Dr. Dick J. Crosby, U. S. Department of Agriculture; School Boys and an Intellectual Life, President Brown Ayres, University of Tennessee; The Preparation of Students for College, Dean Frederick W. Moore, Vanderbilt University; Entrance Examinations in English, Professor Richard Jones, Vanderbilt University, Tennessee; Aims and Methods of Teaching Civics in Elementary and Secondary Schools, Professor Isidore Loeb, University of Missouri; German and French in Secondary Schools, Professor C. C. Ferrell, University of Mississippi.

SOUTHERN EDUCATIONAL REVIEW

How to Affiliate Other Collegiate Institutions in the State With the State University.

By President Webster Merrifield,

University of North Dakota.

I can perhaps best tell how to affiliate other collegiate institutions in the state with the State University by telling how we have done it in the case of the Methodist College in our state and how we expect to do it in the case of the colleges of other denominations —particularly the Baptist and Presbyterian—as soon as those denominations shall see their way to establish colleges in North Dakota. My paper this morning is largely a repetition in substance and in part in form of what I have said on another occasion.

Fifteen years ago, in my annual report to the Board of Trustees of the State University, I urged the importance of adopting some system of educational co-operation between the University and the several denominations of the state before the latter should become hopelessly committed to the policy of separate denominational colleges. The Congregationalists had already established a college at Fargo and the Methodists were agitating the question of establishing a college and shortly afterward did so at Wahpeton in our state. My trustees took no action at the time, but during the years following, I discussed the matter freely with representative men of the several denominations in our state as opportunity offered, and in March, 1900, in an address before the Methodist conference held at Grand Forks I canvassed the question quite fully and on behalf of the State University extended to the Methodist Church of the state a formal invitation to remove their educational institution to a location in the immediate neighborhood of the State University and to make use of the facilities afforded by the University to whatever extent they might find it to their advantage to do so. Many prominent members of the conference, including President Robertson of the Methodist College, expressed themselves as in a general way favorable to the proposition, but considered themselves under moral

obligations to certain benefactors of the College and particularly to the citizens of Wahpeton, not to agitate the question at that time. However, in the early winter of 1904 the Trustees of the Methodist College, whose style and title was The Red River Valley University, began to consider the feasibility of removing the college to another location, and I renewed my invitation to remove it to Grand Forks and affiliate it with the State University. On the 9th of January, 1905, President Robertson visited the University at my invitation and we discussed the situation in all its phases. We finally arrived at a possible basis of co-operation which was embodied in the following memorandum:

"Whereas, The State University is in theory the university of all the people of the state, and is supported by the taxes of the members of the several denominations as well as of the other citizens of the state, it would seem to be appropriate and fitting that the churches of the several denominations in the state should avail themselves of the privileges which belong to their members as citizens of the state, and should use, to whatever extent may seem desirable in the conduct of their educational work, the facilities afforded by the State University."

It is recognized that the State University is a civic institution and has for its mission the training of the youth of the state for efficient service as citizens. It is recognized, also, that the distinctive object of the church in maintaining schools of its own is to insure trained leadership in religious and denominational work. There is, therefore, logically, no conflict between their respective missions, for the same young people are to serve in both these capacities. These two missions being in no sense antagonistic, but supplementary, it would seem the part of wise economy that these two educational agencies should avail themselves, so far as possible, of the facilities and appliances of each other in working out their respective missions, keeping always in view the principle of the separation of church and state in so far as regards the control and expenditure of the financial resources of each.

Accepting the foregoing principles as fundamentally sound, the University of North Dakota cordially invites the people of the various denominations of the state to the consideration of a plan under which the members of the several denominations, while preserving their denominational identity and maintaining separate institutions for such educational work as they may deem necessary, shall join as citizens in patronage of the State University as the common agency of the state. As a basis of co-operation between the State Uni-

versity and the Methodist Church of the state, the following suggestions seem practicable:

1. That the Methodist Church change the name of its institution from Red River Valley University to Wesley College.

2. That a building or buildings be erected in near proximity to the State University, but on a separate campus, to include a Guild Hall, such recitation rooms as may be required for the work proposed, possibly dormitories for young women and young men, and a president's house.

3. That the course of study may be: (a) Bible and Church history, English Bible, New Testament, Greek, Hebrew, Theism, and such other subjects as the college may elect in pursuance of its purposes. (b) A brief course that may be designated as a Bible Normal course, intended especially to fit students to become efficient Sunday school teachers and lay workers, and upon the completion of which certificates of recognition may be granted. (c) Instruction in music and elocution may be given if desired and appropriate certificates granted. (d) Guild Hall lectures.

4. That the State University grant for work done in subjects under (a) above, such credit toward the B. A. degree as it gives to technical work done in its own professional schools and to work done in other colleges of reputable standing. Likewise, Wesley College shall give credit for work done in the State University in similar manner as preparation for any degree or certificate it may offer.

5. Each institution shall have full control of the discipline of students upon its own grounds.

6. It shall be deemed proper for students to take degrees from both institutions if they so desire.

WEBSTER MERRIFIELD.
EDWARD P. ROBERTSON.

This memorandum was subsequently approved by the faculty of the State University with the following proviso, viz., "that the State University shall in all cases be the judge of the quality of work to be accepted by it toward the B. A. degree and recognizes the right of Wesley College to be the judge of the quality of work to be accepted for any degrees it may grant." The Trustees of the State University also gave their approval to the movement in the following resolution:

"Resolved, That the Board of Trustees of the University of North Dakota extend to all educational agencies within the state a cordial invitation to avail themselves to whatever extent may seem desirable

of the facilities and appliances afforded by the University for the working out of their several educational purposes." The memorandum just qouted, together with the resolutions of the Faculty and Trustees, constitute the formal invitation of the State University. Responding to this invitation, the Trustees of the Red River Valley University, on May 16, 1905, voted to remove their institution from Wahpeton to a location adjoining the campus of the State University and to reopen the same under the name of Wesley College substantially upon the basis outlined in the memorandum quoted above. That this action has the unqualified approval of the Methodist church of North Dakota is evidenced by the fact that at the annual conference held at Valley City last month a resolution introduced by the Committee on Education heartily endorsing the movement recited above was unanimously and most enthusiastically adopted and the conference pledged itself by unanimous vote to a cordial and generous support of Wesley College. Bishop McCabe, who presided at this conference, is reported by the daily papers to have expressed himself as "pleased and amazed at the success of the movement already attained." The old buildings of the Red River Valley University at Wahpeton have been disposed of and in addition to the proceeds realized from the sale President Robertson has already received by subscription $125,000 of the $200,000 fund which it is proposed to raise for the endowment of Wesley College. A faculty of five members has been employed by the College and work is being carried on during the present year in all the branches indicated under (a), (b) and (c) of the third paragraph of the memorandum quoted above. A tract of 80 acres adjoining the University campus has been purchased by the Trustees of Wesley College as a site for the college and for the homes of the President and faculty. A portion of this has been set aside for the use of other denominations which may follow the example of the Methodists of the state in establishing schools, guild halls or theological seminaries in affiliation with the State University. The Baptists of the state have already placed themselves emphatically upon record as favoring the plan through a report of their committee on education adopted at their annual state convention held at Fargo in June, 1901. The Presbyterian synod of North Dakota has appointed a committee of six with power to employ a clergyman who shall nominally be assistant to the pastor of the Presbyterian Church of Grand Forks, but whose duties shall be, practically, those of pastor at the University to look after the religious interests of such students as are members or adherents of the Presbyterian Church. It

is believed that this action is preliminary to the establishment of a Presbyterian Guild Hall or college to be located in the immediate vicinity of the University campus in affiliation with the State University. I have expressions entirely favorable to the general movement from Bishop Mann of the Episcopal Church in our state and from representative men in most of the other religious denominations. I am satisfied that, with the possible exception of the Congregationalists, who are already committed to an independent college at Fargo, all the denominations of the state, when the time comes for them to establish colleges or seminaries of their own, will do so in the immediate neighborhood of the State University and in affiliation with the University.

This, in brief, constitutes the history of the movement toward co-operation between the church schools and the State University in my state. That this is but an incident in a widespread movement throughout the country is evidenced by the following examples of co-operation elsewhere, viz., on the part of the Methodists, Church of England, Low Anglicans and Catholics at the University of Toronto; of the Presbyterian, the Diocesan, the Wesleyan and the Congregational churches at McGill University, Montreal; of the Church of England, Catholics, Methodists and Presbyterians at the University of Manitoba; of the Congregationalists, the Christians or Campbellites, the Methodist Episcopal Church South, the Presbyterians and the Unitarians at the University of California; of the Christians, the Episcopalians, the Baptists and the Presbyterians at the University of Michigan; of the Presbyterians, the Baptists and the Episcopalians at the University of West Virginia; of the Christians, the Northern and Southern Presbyterians and the Episcopalians at the University of Missouri; of the Baptists at the University of Washington; the Episcopalians, Lutherans and Presbyterians at the University of Nebraska; the Presbyterians and Christians at the University of Kansas; the Congregationalists at the University of Wisconsin; the Christians at the University of Oregon, and the Methodists and Presbyterians at the University of Illinois. Numerous other instances might be cited of resolutions passed and tentative action taken by representative bodies of the different religious denominations, looking to some form of co-operation between these denominations and our great and rapidly growing state universities, but sufficient instances have been cited to show that the movement is general throughout the country and that the great religious denominations of America are coming to recognize not only their duty to the great numbers of young people of their

several communions enrolled as students in our state universities, but the expediency from every point of view of changing their old-time attitude, often one of neutrality, sometimes one of positive hostility, toward the state university, into one of friendly co-operation. In two or three of the instances cited above the movement is only tentative, but in all the others the movement has taken definite shape, ranging from a college pastorate to a guild hall, a theological seminary or an institution doing full collegiate work except in the natural sciences, instruction in which is, I believe, in all the cases covered left to the State University. In none of the cases cited does the affiliated college grant an independent degree and in all of them there is much duplication of work between the University and the affiliated college. Did time permit I could read to this Association letters from the heads of almost all of these affiliated colleges cited and from the heads of the State Universities with which the affiliation has been made, testifying in the most unmistakable terms to the generally satisfactory results which have attended the movement toward affiliation. I content myself with quoting in part letters from Rev. Dr. John Potts, educational and financial secretary of the Methodist Church for Canada, and one of the best known Methodists on this continent, and from Dean F. H. Wallace of the faculty of theology in Victoria College, the Methodist school of Ontario in affiliation with Toronto University. Dr. Potts says: "We have had sufficient time to test the value of the relationship. I think there is but one opinion now as to the importance of it. We gain distinct financial benefit by having all the expensive parts of the university, such as sciences, etc., without any cost to us, and we have at the same time the opportunity and privilege of moral influence over the students, and the privilege also of exerting a moral influence over the university."

Dean Wallace says: "We have gained for our students the advantages of the equipment and the wider courses and the prestige of the degrees of the University of Toronto. At the same time we have retained almost intact the individuality and autonomy of our own college life. Our students are very loyal to their own college, and maintain its societies and traditions, even its own sports." And, touching the religious atmosphere, he continues: "And, above all, we find no loss of religious life. The spiritual side of our work was never stronger and more satisfactory than to-day. Indeed, our removal to Toronto and association with a large university have made it more possible than formerly to come under the influence of great religious leaders and movements, such as the International Com-

mittee of the Y. M. C. A., the Students' Missionary Volunteer's convention, John R. Mott, R. E. Speer, etc."

In the following respects it is believed that the movement which has been inaugurated in North Dakota touches high-water mark in the general movement toward state and denominational co-operation in educational work.

1. There will be no duplication of work in the two institutions.

2. A year's work, quasi theological in character, done by the students of Wesley College in their own institution may be credited toward the B. A. degree in the State University. This concession the State University can safely make, for it retains full right to judge of the quality of work done in the other institution, while denominational pride and interest alike will prompt the co-operating institution to make its work of a character to compare favorably with that done in the State University. The subjects for which credit may be given by the State University, while not perhaps the conventional academic subjects, have yet had long and honorable recognition in the curricula of some of the oldest and most honored colleges in the land. In these days of broad electives who shall say that the study of New Testament Greek, Church History, Bible Bistory, Biblical literature and the Evidences of Christianity is not as truly educational and may not as truly contribute to liberal culture as many of the electives offered by our state universities in their B. A. or equivalent courses? It is now generally admitted by educational leaders that it is the method of study rather than the content studied that determines educational values.

3. The affiliated college, by retaining its degree-conferring power, retains thereby in large measure its independent identity and there is thus removed one of the strongest objections urged by denominational schools, already established, against affiliation. To what extent this independent degree-conferring power will be exercised by the affiliated school in practice is, of course, yet to be determined. In any event, as three-fourths of the work on which its degree, if granted, will be based will have to be done in the State University and the remaining one-fourth must be of a quality to be approved by the State University, there is little fear that the degree of the affiliated college, if granted at all, will be discredited or will represent a low standard of attainment on the part of its recipients.

The great ends to be gained by the co-operation of state and church schools are, of course, financial economy and a wise conservation of energy. The gain in economy alone ought to be decisive.

The members of this conference certainly do not need to be reminded that modern institutions of higher education are exceedingly costly enterprises. Four of our state universities received during the last school year incomes in excess of half a million dollars each; nine an income in excess of a quarter of a million each; and twenty-four an income in excess of $100,000 each. Fifteen of them possess plants representing an investment of more than a million dollars each. Were the different church schools in each commonwealth to group themselves about the State University, their students would receive the same instruction as those of the State University without a penny of cost to the several denominations and with only an insignificant increase of cost to the state. The children of the church schools would be under exactly the same religious instruction and influence as at present, while receiving in addition the inspiration which comes from the vigorous intellectual life of the whole University. For students in a theological seminary such a connection is especially valuable, tending as it does to make them broad and tolerant and affording an intellectual stimulus which no detached theological seminary can offer. This influence, indeed, is reciprocal, the life of the University gaining, perhaps, in spiritual quickening and uplift quite as much as it contributes in the way of intellectual stimulus. In the acquisition of secular knowledge we are apt to forget that theory and practice, culture and skill are after all but means to an end and that, as the good Book reminds us, "the fear of the Lord, that is wisdom, and to depart from evil is understanding."

One of the weightiest arguments for co-operation is one, until recently, rarely urged, viz., the distinctly religious influence which the churches would in this way bring to bear upon the great body of young people, many of them from homes not conspicuously religious,, who are receiving their training in our state universities. It seems to me that no such opportunity for effective home missionary work was ever before presented to our great religious denominations, and the field is one which will be constantly and rapidly widening. The growth of our state universities is certainly one of the startling phenomena of our time.

During the ten years from 1896 to 1906, the ten leading colleges of New England, Amherst, Bowdoin, Brown, Boston, Clark, Dartmouth, Harvard, Wesleyan, Williams and Yale, all professedly unsectarian, increased their attendance thirty-six per cent. The ten following colleges, mainly of the middle west, namely, Albion, Augustana, Bethany, Blackburn, Buchtel, Bucknell, Catholic Uni-

versity of America, DePauw, Doane and Kenyon, all professedly denominational in character and representing nine different denominations, decreased their attendance one-half of one per cent. The ten following representative colleges, mainly of the north central states, namely, Beloit, Carleton, Cornell, Illinois, Iowa, Knox, Marietta, Ripon, Oberlin and Colorado, all professedly non-sectarian, but competitors, as the non-sectarian New England colleges were not, of strong state universities, increased their attendance during the ten years named, fourteen per cent. During the same period, the ten representative state universities, Ohio, Indiana, Illinois, Michigan, Wiscosin, Minnesota, Iowa, Nebraska, Kansas and Missouri increased their attendance more than ninety-six per cent. The total attendance at the state universities named was eighteen per cent greater than that of the thirty sectarian and non-sectarian colleges combined, and more than forty per cent greater than the attendance of strictly college grade in the thirty institutions named. These statistics are cited with no invidious intent, but simply to show what a magnificent opportunity our great religious denominations have to impress themselves religiously upon the young men and women who, in rapidly increasing numbers, are thronging the halls of our great state universities. In our older communities where the different denominations have large sums tied up in costly and elaborate plants, the difficulties of such a union as I have suggested are not to be underrated; but in all our newer western states where several of the great denominations have not yet started schools of their own and where no denomination has as yet spent any considerable sum in buildings and equipment, the question I have raised is at least worthy of the most careful consideration. Should the churches respond to the invitations for co-operation which have been extended by most, if not all, of our state universities, they will find there no uncongenial atmosphere. No more vigorous Christian Associations of young people are to be found anywhere than at our state universities. As a communicant of one of our great religious denominations and at the same time as one who has seen much of student life at many of our great western state universities, I repudiate with President Northrop the imputation "that our state institutions of higher learning are not religious in the best sense of the word, and that their graduates do not go out into life with as genuine a respect for Christianity and as good a conception of what Christianity is as the students of any institution in the land." I have at hand no data, if such exist, to show what proportion of the professors and instructors in our state uni-

versities are communicants of Christian churches; but I know that, in my own institution, out of thirty-five members of our general faculty (not including our professional schools) all but one are communicants of a Christian church. A recent census at the University of North Dakota showed all but twelve and one half per cent of the students reached to be professing Christians and church members. A religious census of our state universities taken by Professor Kelsey of the University of Michigan some years ago showed fifty-seven and one-half per cent of the students in the leading state universities of the country to be communicants of Christian churches. Of course, a very large proportion of the remaining forty-two and one-half per cent were church adherents and regular church attendants. It is stated, on what should be good authority, that in each of our great western state universities, with possibly two exceptions, each religious denomination in the state is represented by a larger number of communicants among the student body than are to be found in its own church college in the same state. If this be true, it would seem to afford sufficient reason why the denominations should begin to do something, in a systematic way, toward looking after the spiritual welfare of that important part of their membership which is to be found in the state universities.

In concluding this paper I quote briefly from an address which I made about a month ago on the occasion of the breaking of ground for Sayre Hall, the first of the five contemplated buildings of Wesley College: "I readily admit the contention of the church that secular and religious education should go hand in hand. But in what way can this be brought about on so extended a scale, so reasonably, so economically in the conserving alike of material resources and of intellectual and spiritual energy, as through just such a movement as we are inaugurating to-day? As an humble layman, myself a communicant in one of the great religious denominations, I blame the church for so long holding aloof from our great state universities. These, it seems to me, not only have a claim upon the church, to which she has been heretofore singularly blind, but offer to the church a most splendid field for home missionary work, in neglecting which the church has shown an unexampled and most inexcusable short-sightedness. With vice rampant and with business and civic corruption stalking our land, the church has too long broken her lances in tilts with imaginary windmills. If the citadel of belief is being undermined, let the church devote herself to buttressing the bulwarks of faith and no longer

fritter her energy in seeking to wrest from the state a monopoly or even a division of purely secular education. While the church is dwadling with sines and co-sines, with test tubes and instruments of precision, the enemy is sowing the tares of skepticism and unbelief in the very vineyard of the elect. * * * * How can the church justify herself in longer ignoring utterly the very flower of the youth of our states, who are largely to-day and increasingly with each succeeding year, to be found in our great state universities, and wasting her strength and substance in a losing and all but desperate effort to entice the best brain and manhood of the commonwealth into weak, indifferently equipped and most inadequately maintained independent denominational colleges of her own? * * * * At the risk of seeming to be presumptuous, I venture to warn the Christian denominations of this state that, by a policy of separation from and antagonism to the state system of schools in North Dakota—and the one policy almost necessitates the other—they will assuredly lose to their pulpits the best brain and young manhood of the state and consequently lose to their pews the men and women of the highest intelligence and the most earnest moral purpose. The time is long past when the pulpit can command the pew in the name of authority. If it will not do it in the name of a conciliatory reasonableness, it will preach to increasingly empty pews and with an increasingly waning power.

"The movement which we are formally inaugurating to-day means the enlisting of two mighty forces, the mightiest of our era, church and state, in the common cause of civic and personal righteousness. It means the bridging of a chasm—long an impassable if not a bloody chasm—between these two great forces of civilization.

What Are the Essentials in Subjects in the Elementary School Course?

By Elmer Ellsworth Brown,

United States Commissioner of Education.

So far as education in the broad and large is concerned, we recall the fact that it had passed through many stages before it became definitely centered in a definite institution known as the school. There was a great deal of education before there were any schools as we know them. There came a time when a new education began to claim attention, and that new education consisted of the three R's, or in time it was known as the seven liberal arts. There has been many a new education since that time, and each in turn has been heralded and welcomed by one party as a fresh revelation and has been denounced by an opposing party as mere novelty and fad.

But every great change in education has been closely interwoven with other changes, in which the whole social fabric has been involved. The essential subjects of one age have been different from the essential subjects of another age. The subjects have changed because the times have changed. Reading, writing and arithmetic were in one stage mere accomplishments or altogether unknown. At another stage they would seem to be all in all. If so great a change as this could take place, what change may there not be? Is anything, in fact, essential at all times and everywhere?

Whether there are really any permanent subjects or not depends on what meaning we give to the word *subject*. I shall not stop to quibble concerning the term, but simply diving in somewhere near the middle of this wide question, I should like to say that historically the most permanent subject of all seems to me that which we designate as morals and manners. And that is so because it is preeminently the subject which lends interest to all the rest and determines the value of all. With all the changes which have been and are yet to be, we can hardly conceive of any rounded process of education in which this subject does not hold its place, in the earliest age of history or in the last, in America, Mars, or the satellites of Sirius. So long as human nature is what it is, the practice of virtue, the making of the moral life, must be among the things that claim the chief regard of men, simply because men have the human character. And that human nature is about as constant a fact as history has yet discovered. When we get beyond

human nature we need not greatly concern ourselves with education.

Yet moral education differs so greatly with differing social conditions that this subject hardly seems the same in widely separated periods. At one time it is incidental to religion, at another it is mainly civic or military or industrial. The fact is, that in all ages it has many aspects and must be approached from many different sides. Which of its elements shall take the leading part, will depend at any given time on the conditions of that time. Just now in the public schools of America it is primarily a civic matter. It may in the future be primarily an industrial matter. But no one aspect will ever exhaust its significance. And the chief practical consideration for us is this, that we must teach the subject of morals in many ways, direct and indirect. Among these ways, I believe direct instruction in the principles and the particulars of right and honorable conduct, has a place of no small importance and should be more strongly emphasized.

When we come to consider, after this universal subject, what may be the essential subjects at any given period, as at this present period, in which we are chiefly concerned, we find we are dealing with an interesting side of social history, namely, the history of the school, in which education has become sharply defined and institutionalized. When the school fairly came into being as the organized agency of education, and the only agency organized for education alone, it was only a small part of education that became its recognized function. Whatever occasional and partial organization there may have been for other parts and kinds of education, the school settled down at an early day to a narrow preoccupation with the literary side of instruction and with a few subjects closely connected with this literary side. Public education now proceeded in two parallel and for the most part disconnected lines, the education of the school on the one hand, and the education given incidentally by other agencies on the other hand. I suppose every human institution has and always will have an educational side. Specific preparation for industrial life is one of the forms of education thus left over for incidental treatment. So the industrial training of the home and of the guild, the apprenticeship system, in a word, went on side by side with the more definitely organized literary education of the school. The recent history of education is in large part the history of the expansion of that specialized educational instrumentality, the literary school, to take in some of the outlying ranges of education, and particularly its enlargement by

additions from the field occupied by one form or another of apprenticeship.

There are various reasons why the school must inevitably expand in this way. The agency organized and carried on for the express purposes of education was certain to be in the long run a more effective instrument of education than that which was merely subordinate and tributary to some other purpose. The difference might not be apparent when one class of people served an apprenticeship and another class received a literary education. But with the nineteenth century, and earlier in some states, successful attempts were made to give to all the people the benefit of a literary education. The contrast between the general effectiveness of school methods and the wastefulness and inequalities of apprentice methods became more clearly apparent. But certain minor advantages of apprenticeship became apparent, too, and the methods of the schools underwent a gradual change, particularly in the way of object lessons and laboratory practice. So the school became fitted to deal with some phases of education which had hitherto been beyond its reach. Besides all this, a subtle change has been going on in men's attitude toward education. It is coming to be less a subordinate and more an independent and commanding interest. An illustration of this change, on a large scale, may be seen in certain European countries, where there is now a manifest tendency to concentrate the scattered educational activities of the government under the educational rather than the technical branches of adimnistration. Agricultural education, for example, may logically fall under either the agricultural or the educational department. Hitherto the interest in such education has been largely agricultural and it has been under the direction of departments of agriculture. With the growth of intelligent interest in the educational bearings of the subject, there has appeared a tendency to co-ordinate agricultural education with the general educational system; and so with other branches of instruction, in science and the arts. A similar tendency appears in that gradual extension of instruction in our schools and universities whereby certain subjects become school subjects which had long been reserved for the workshop and for the apprentice.

So it happens that our schools are coming to be broadly educational institutions instead of narrowly literary institutions. And this movement is undoubtedly to continue, for the people will that it shall be so, and the whole social momentum of the time carries us in this direction. The three R's and the other subjects con-

nected with these cannot continue to hold the field alone against all comers. Some of the subjects brought over from the manual arts are destined to take their place beside them.

This change we can none of us prevent if we would, and I am sure we would not prevent it if we could. But there is one thing to be done about it that, in some measure, we can do. We can see that the good of the old order is carried over into the new. The older subjects made for intelligence, the newer subjects make for manual skill. In order even that the full value of manual skill may be realized, we must needs hold fast to the earlier emphasis on pure intelligence.

The nineteenth century ideal of education, particularly the nineteenth century ideal in the United States, was one of the finest things in the history of civilization. It was the conception of the freeman of old Athens carried over into the new world and made an ideal for all men, forasmuch as all men shall be free. To make men wise, self-regulated, self-reliant, this was held to be a better thing than to give them mastery of a trade; for those who were so educated could turn to what they would, could master new employments as the need should arise. And whatever their labor in life might be or the rewards of their labor, it would yield them the greatest possible values, for they would know how to use it to the higher ends, for themselves, for their friends, and for their country. We may allow something for enthusiasm and exaggeration, but fundamentally this view holds good, and I hope that with all of our pursuit of new and promising ideals, we shall keep faith with this deeply grounded conviction. Moreover, we need to put into our training for manual skill, which fills a serious lack in that earlier schooling, the same liberal spirit which characterized the old. In accordance with this spirit, we shall make the special skill of any single trade rest upon some mastery of the broad fundamentals of drawing, manual training, and free design. The subjects in the domain of manual pursuits which have the strongest claim to a place among the essentials in our courses of study, are those which will give the best introduction to a wide range of special dexterities, and render the learner as free as possible to adjust himself to change of occupation or to progressive improvements in a single occupation.

Finally, with this inevitable expansion of the functions of the school, certain things will take a high place in the educational curriculum which once belonged solely to the domain of play. For generations our schools have made place for free play, but merely

as recreation from tasks. Now with the tendency to a hardening of social conditions, particularly in our large cities, play becomes almost as important a consideration in the schools as work. We need it more than ever for health; we need it that the few and precious hours of leisure may be made refreshing and not debasing; we need it to give flexibility and freedom to the spirit of the individual, now hard-pressed by the growing crowd and the struggle for existence; we need it that the moving of pure joy among our people may carry us toward the finer forms of expression and give us a spontaneous national art.

Let me speak of only one subject here, which belongs to the common ground of art and play. We need music in our modern life, almost as much as we need bread, and we need it in our schools almost as much as we need the multiplication table. We need it in our lives, not only to help us worship, but that we may carry away something better than a ringing headache from our precious hours of diversion. We need it in our schools, not as a tolerated fact, but as one of the things that shall make our individual and national character.

In fact, the sum of all I have tried to say is this: That the fads and luxuries of one age may be the necessities of another. We must take on new studies with a new age, and we must bind the old and the new together by an everlasting moral conviction, and an everlasting insistence on that intelligence that shall make men free.

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*The Practical Side of the Classics.**

WALTER MILLER.

On occasions like this, prefatory remarks are, as a rule, best dispensed with. The more directly the subject is attacked, the better for all concerned. But for me personally, this particular occasion is exceptional.

I do not enjoy the semblance of coming before this body of my colleagues and students and friends of the University with a brief for that noble department of study to which my life is consecrated. Accordingly, I must explain that the subject of my address is not of my own choosing, but is imposed by the Chairman of the Lecture Committee. Please remember, therefore, in all that I say, that I

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*Address at the opening of the Tulane University of Louisiana.

do so upon the express invitation of a man of science, our Professor of Chemistry, that I should present a "Plea for the Classics." And, whenever I wish to make my statements particularly strong, I shall, for fear of being accused of exaggerating the importance of my own field of work, quote not from philologists, but from specialists in the scientific field.

In order to get the proper attitude toward the problem before us, we ought first to review the whole history of education. That is manifestly impossible. I can at best but briefly suggest it.

Our whole modern civilization, this age of steel and steam and electricity, with all its triumphs of applied science in the creation of great labor-saving machinery, in rapid transit and the annihilation of distance and time, is a wondrous growth, exceeding in one century in these particulars all that previous history has recorded. But follow this marvelous shoot downward to the stem, and we shall find that it is, after all, a graft. This, to use Dr. Smith's figure, "was engrafted upon the sturdy stem of the olden culture, a stem that struck its roots deep into the sacred soil of Greece and Rome, through the rich accumulated alluvium of nearly thirty centuries. Into this graft, this new scion, the generous sap of the ancient trunk has been poured abundantly, and a prodigious growth and wonderful fruitage have resulted."

The art of Greece has been the inspiration and the despair of all artists since the day when the lofty spirit of Hellenic greatness began to flag. The mythology of Greece has become the language of symbol among all civilized peoples, of whatever name and tongue. The poetry, the philosophy, the ethics, and the science, as well as the arts of Greece, illumine every modern classic page. Says Alfred Baker, Professor of Mathematics in the University of Toronto: "If we should ever think of a people—a chosen people—who had a message and a revelation to the world, that people was the ancient Greeks. We owe them an incalculable debt for our knowledge of art, literature, and science, and of the three our debt is perhaps greatest for their legacy of science." Whether consciously or unconsciously, we build upon foundations laid by the great thinkers—poets, artists, philosophers, scientists—of the days when man was, both in body and in intellect, at his best. Even this present age of scientific education is but continuing the work where Greece left off. Others have labored and we have entered into their labors.

Even the old Athenian system of education was complete. Nothing was wanting. And Athens was the university centre of the world, from the days of Gorgias to the fall of the Eastern Empire.

Her culture and civilization were universally triumphant and still are.

When Rome made the soil of Greece a Roman province, but bowed before the power of her captive's intellect and fell herself a captive to Grecian arts and letters, the Athenian education was bodily transplanted to Italian soil.

Rome spread her power and her language all over Western Europe, and the official Latin tongue became the chief subject of study in the schools as the only means to social, political, and afterwards ecclesiastical advancement. On one ground and another, it has maintained its place as the first and most essential element in educational systems that still exist.

Barbarism and Christianity then joined hands to crush the old university centres and blot out Grecian culture from the world. Their success, while not absolute, was only too complete. The extinguishing of the light of letters left the world in darkness for centuries, with only here and there a flickering rush light of logical, mystical, or ecclesiastical subtleties. Such profound questions as to how many spirits could stand together upon the point of a cambric needle, or whether a spirit could pass from one point to another without passing through the intervening space, however absurd and valueless they may appear to us now, did nevertheless serve to sharpen men's wits and make them hunger and thirst after real ideas. Whence should spring the fountain for satisfying such thirst? There had been creators of ideals once; had their products all vanished with the departure of their culture and their power? Through the dark ages the capacity for ideas seems to have died out in men. For the world was asleep—asleep for a thousand years of rest and recreation. In the twelfth century it began to awake, and with the Italian renaissance the dead capacity for ideas was resurrected. "There were many forces," says Professor Shoup, "that worked together to produce the Renaissance; but in Italy, at least, the main cause was the recovery and study of the Greek and Latin classics, aided by the ever-present object lessons of the grandeur of Roman architecture and the loveliness of Greek sculpture."

Thus, with the restoration of the Athenian spirit among men, came also the resurrection of the university idea. The mediaeval universities had hitherto provided for law, theology, and medicine. The new movement, which saved the arts and sciences of Greece and Rome, now brought in the "humanities" as the education of culture, and the way was opened wide for the easy development

of the modern university. "The culture of the classics had to be re-appropriated, before the movement of the modern mind could begin." (Symonds.) It was through them that came again the spiritual freedom, the intellectual culture, the powers of criticism, of comparison, and of scientific research that make an ideal education possible in our own day. And, with all the advances of the "new education," the humanities are still the humanities, enriched by many a wholesome increment. Amid all other agencies for culture, they still form the essential element to that aesthetic culture which all consider important and which some consider paramount, though we all recognize that there are many things to learn besides Greek and Latin.

Out of this new shoot springing up from the old olive stump of intellectual Attica have branched forth the various scions which are our modern universities. Nothing really new has been added to the sap in the veins of the tree of knowledge, in spite of all the grafts that have been set upon it. Indeed, so little has the university ideal grown since the unrivaled genius of Athens at the climax of her intellectual power evolved it, that it has been seriously questioned whether there is any such thing as the "new education." "There is nothing new under the sun" is nowhere more true or false than in the intellectual world. Sir Henry Maine goes so far as to say that "except the blind forces of Nature, nothing moves in this world which is not Greek in its origin." There have been many revivals of knowledge besides the Renaissance; within a few years zoology, chemistry, and geology have all been born again. How hard we toil to advance knowledge by introducing some "new" institution, discovering some "new" truth. But truth is eternal; and when our discovery is made, we find the real meaning of the poet's words:

> Wer kann * * * was Kluges denken
> Das nicht die Vorwelt schon gedacht?

The so-called "new education" makes its proudest *boast* that it is "practical." That might be disputed. The first thing that we, the people of the most utilitarian age ever known, think of as the "practical" is dollars and cents. None of us object seriously to wealth—of our own—but it is not a high standard by which to measure the really good things of life—not even the practical things. The *curse* of our educational spirit is our tendency to look upon education as a mere tool for money-getting. Those who look upon knowledge only from the standpoint of "practical" utility and translate "prac-

tical" with "money-getting" and explain the useful as "that which may be turned into cash"—such Philistinism is likely to see in the university only a bureau for the delivery of special information, a mere warehouse for literary, medical, or legal merchandise, instead of a temple of knowledge and truth. The enrichment of knowledge and power is not considered and therefore not desired. Too general is the conception in our land that nothing is practical, nothing is useful, even in matters of pure intellect, unless it can be made financially profitable. Are we, brain and brawn, so wholly enslaved to Mammon? If not, then what are the really practical things that are taught in college? Everything may be practical, or everything may be unpractical; that depends upon the student. Anything is practical—useful—that will improve his sense, give him power of thinking closely and soundly and making others think with him. Not all that is applied science is necessarily practical, therefore, and not all that is literature or art or pure theory or speculation is unpractical. As navigation, astronomy, and engineering, the most practical of all subjects, could no more grow and flourish without the abstract theoretical knowledge of conic sections, quaternions, and differential equations, than a tree could grow and flourish with its top deep-bedded in the earth and its roots high in the air; so, of no less practical importance are the humanities; all higher civilization properly roots in them, and they cannot be plucked up without withering the fairest bloom and the fairest fruits of civilization itself. The ministrations of the humanities to our civilized life in the thousand forms of literature, art, pure science, speculative research, criticism, and the like, are not less important or practical, because they are more subtle and elusive than the ministrations of applied science. A study may, therefore, be "useful" in the highest, widest sense, without being of any direct, palpable use in the transaction of business. If it has served to enlarge, sharpen, or invigorate any one of the mental powers; if it has imparted vigor or accuracy of reasoning; if it has trained the mind to a habit of close attention; if it has served to furnish a sound and correct judgment; then that branch has been of the greatest possible use.

Let us not be misled by what the Philistine world calls practical. In the truer sense of the word, anything is practical that makes a man or a community or a state or a nation stronger or better or wiser, anything that helps a man to live up to the best that is in him, to be true to himself, to his neighbor, and to his God. That is practical, and nothing else is, except as it is wrought through such a medium.

With such practical ends in view, therefore, I come to-day to plead not alone for the old education of proper morals, polished manners, elegant speech, nor yet for the new education of exclusive science, but for the proper balance between the old and the new—the culture of the humanities and of nature as a basis for later specialization. Specialization before breadth is attained will prove to be not power and culture, but weakness and narrowness, cramped and warped. It will be the same, whatever the line of premature specialization. Exclusive devotion from the beginning to the arts and letters is ruinous to our best development, even though that has been the proved and approved higher education of the last four hundred years. So thoroughly approved it still is, that a man of science like Clarence King, the late Director of the U. S. Geological Survey, may say (Forum, 1892, p. 23):

"So far as classical culture has brought generation after generation of youths into the presence, and kept them in the daily company of the greatest Roman and Greek poets, conquerors, artists, or philosophers, its effect has been, as no one disputes, to develop the very best modern minds. No less an expert in wisdom than Solomon has said, 'He that walketh with wise men shall be wise.' Classical education at its best has caused its followers to walk in youth with wise men and men of every form of artistic excellence, every phase of literary and philosophic accomplishment. It has revealed not only the strongest and boldest brain-work of giants, but unveiled all that is most chaste and elegant, most lucid and splendid, in the manner of human expression. From fountains of deepest feeling and springs of sparkling wit, it led streams of perennial flow into the territory of the student's mind and made thereof a garden. It gave a harmonious grace to the intellectual carriage, mellowed the timbre of literary voices, and induced a composed control of mind with an artist's sense of form. Incidentally, necessity for continued application and rigid philological study forced the habit of work, cultivated memory, and bred a respect for precision and accuracy. It therefore afforded discipline. The crowning reward for experiencing this mode of culture is, however, an enlightened state of mind. The brightest jewel in its crown is ideality." And President Butler confidently predicts that "No culture will ever be considered broad and deep unless it rests upon an understanding of the civilizations of Greece and Rome. * * * To enter into the spirit of Homer, Sophocles, Demosthenes and Plato, of Cicero, Virgil, Horace and Tacitus, and to understand the civilizations and the points of view

that they represent, are, from one point of view, almost enough alone to give the one so fortunate a claim to culture."

And yet by confining ourselves to such a course, we come to live so much in the realm of the ideal, that we ignore or forget the real things around us. The great literatures of the world are not our only source of truth, nor the only scene of beauty, nor the only means of culture. The whole business of any man is to know and to live the truth. He must have eyes to see truth wherever it may be found; and there are even clearer, surer revelations of truth in God's world around us than there are in the world of letters. "The rocks and shells, the frogs and lilies always tell the absolute truth." The rain-worm or the toad may have truths to tell us in its homely way, if we can but understand its language—verities that may be just as true and sublime as is the ideal beauty of the splendid sculpture of a Phidias or the simple grace of an Homeric epic or the awful grandeur of an Aeschylean tragedy. And the truths the worm has to reveal of the physical world need not all be sacrificed to the truths the Greek poets and philosophers and sculptors have to tell of the world of the soul. And still less are those glorious revelations of great souls of the days when man was at his best, and that feeling for the ideally beautiful in literature and art, to be sacrificed to the search for truths of the merely physical world. Too one-sided application to the study of the physical sciences will prove even more ruinous to the making of perfect men than too one-sided devotion to the humanities. The appreciation and love of the beautiful, religion, sentiment—these nobler faculties of the human spirit, without whose cultivation no one can be a complete man—are not naturally fostered in such an environment. To have the power of using what is gained by science study, a man must first have been moralized; and for moralizing him, it will not be found easy, as Matthew Arnold says, to dispense with those old agents—letters, poetry, religion. All true education must build the mind and heart both up and out—out of narrow self into the breadth of divine humanity. The purely scientific education will not cultivate sentiment, nor (it is asserted) will it develop a sense of the relativity of facts; for that reason the purely scientific student cannot be expected to possess a critical spirit. To quote once more from the geologist, Clarence King: "With all its novel powers and practical sense, I am forced to admit that the purely scientific brain is miserably mechanical; it seems to have become a splendid sort of self-directed machine, an incredible automaton, grinding on with its analyses and constructions. But for pure sentiment, for all that spontaneous, joy-

ous Greek waywardness of fancy, for the temperature of passion and the subtler thrill of ideality, you might as well look to a wrought-iron derrick." Both sides of education have proved their right to a place, but not to an exclusive place, in any plan of liberal education. Either one, if pursued to the exclusion of the other, will train and develop but one half of our human nature, and bring forth only half a man or woman. Classical culture, when it has done for the capable student the best it can unaided, has given him culture, refinement, character, ideality, but has left him behind the times in the development of the race and utterly helpless in the presence of all that makes for physical and material progress of the world in which he lives. Until a generation ago education went calmly along cultivating only that one side of our human nature, unconscious that it had another side. The last thirty or forty years have seen the pendulum swing clear to the other extreme, and now we often hear radicals on the other wing advocate maiming our human nature by leaving the ideal half to die of neglect and disuse. This newest education has substituted a new sort of half-man for the old one. "What would be thought of a world-wide school of athletics," says Clarence King, "which would bind up the right leg until it withered and became forever impotent, and make its graduates hop through life on the left? And what student of education could believe it possible that a new great culture would arise" to correct that evil and gravely proceed "to bind up the left leg and make its men hop on the right?" Is there any reason, except the irrational excuse of our American weakness of eternal hurry, why either side of our nature should be so diligently cultivated as to exclude the other; why one-half of the mind should be carefully developed and the other just as carefully destroyed? The greatest naturalist of the last century (or perhaps of any century) draws the picture of such a sacrifice of culture to specialization in its darkest colors. "Up to the age of thirty or beyond it," writes Darwin in his autobiography, "poetry of many kinds, such as the works of Milton, Gray, Byron, Wordsworth, Coleridge, Shelley, gave me great pleasure, and even as a school-boy I took intense delight in Shakespeare. Pictures formerly gave me considerable, and music very great delight. But now for many years I can not endure to read a line of poetry; I have tried lately to read Shakespeare, and found it so intolerably dull that it nauseated me. I have also lost my taste for pictures and music. My mind seems to have become a kind of machine for grinding general laws out of a large collection of facts, but why this should have caused the atrophy of that

part of the brain alone on which the higher tastes depend, I can not conceive. * * * The loss of these tastes is a loss of happiness, and may possibly be injurious to the intellect, and more probably to the moral character, by enfeebling the emotional part of our nature."

If Charles Darwin found the loss of his higher aesthetic tastes so lamentable, how much more lamentable must the paralysis of the intellectual power be, when this exclusive devotion to the cultivation of one side of the intellectual nature begins before the mind has fairly developed. But utilitarianism, with its promises of material wealth, is ready with her reply: "Seek ye first money; culture after wealth;" and technical education, without the basis of broad culture, has grown and spread to an incredible extent. "Its essential narrowness and Philistinism increase with its success in establishing itself" (this from President Butler), and it promises for a long time to come "to assert its overwhelming ascendency, until a race of men shall come upon the stage with about as much religion as a threshing-machine and hardly more social charm than a storage battery."

The desired symmetrical training would cost only a little more time, and would it not be worth the additional outlay? I am convinced that it would. There is much to be said in favor of the old curriculum, in which mental discipline, pure and simple, the culture of the humanities and philosophy, are made the chief end of all the work.

When we consider the two great new principles of our age—the conservation of energy, with all the wonders it has made possible in the material world, and biological evolution, with all the marvels it will produce in the physical and possibly the intellectual well-being of the race—the irresistible attractiveness of the new education, the triumph of the scientific education, and the tendency of students of "practical" minds to confine themselves to the scientific education, are easily comprehended. The educational pendulum has been swinging backward and forward, ever since modern education in the fifteenth century began, first to one extreme, and then to the other, as if no middle ground were possible. Universities were no new thing, when the Renaissance came. They had been established for "practical" purposes; and to the devotees of the "practical" courses, the introduction of the classics was an innovation, and the new learning was frowned upon. The humanists of the Reformation period had a battle to fight against tremendous odds. In order to maintain any place at all, they had to prove that literature was delightful for its own sake, and that Greece and Rome had

something worth while to teach to modern men. The struggle was soon over; the pendulum began to swing the other way; the new learning triumphed throughout Europe; and from the revival of learning down almost to within the memory of men still living, any education without a strong back-bone of Greek and Latin classics was no education. Education meant classical education. But human nature rebels against extremes, and as surely as extremes prevail, so surely will come a reaction.

It is as strange now to reflect that to the conservatives of four hundred years ago the classics were an intolerable innovation, as it is to think that Huxley and his compeers had to struggle so long and so hard for the claims of science to recognition as a force for culture in modern education. And now that the educational sceptre has passed from classics to science, and the scientific spirit dominates every sphere, its more radical advocates would crowd entirely out of the field its most formidable rival, the time-honored humanistic culture, as having no place whatever in an up-to-date education. The pendulum has once more swung as far as it can go. That spirit of science which is intolerant, whether it is philological science that inveighs against natural science or natural science that will allow no place to philological science, is the primal cause of the violent reactions that come in the lines of education; that readiness for revulsion is one of the things that argue most potently for the final triumph of breadth. If Mr. King is right in his estimate of the purely scientific mind unbalanced by those mental pursuits that feed the fancy, ennoble the sentiments, enable us to enjoy the beauty and harmony—and the ardent advocate of the humanities is easily persuaded to believe him—then there is sure to come against the technical scientific education so popular in our day a reaction strong enough to bring about a sweeping revival of the humanities; or, if a compromise can be effected, it may at last stop the swinging pendulum in the middle and produce the harmonious blending of the two cultures that will give us the full, liberal education for which this plea is made.

The world's call is for the man of learning who knows better than any one else how to do some one thing; but he cannot meet the requirements who knows nothing but that one thing; he must know it in its relation to other things; he must see things in their proper proportion. "What science and practical life alike need," says President Butler, "is not narrow men, but broad men sharpened to a point."

The new education, divorced from the training of the humanities,

has tried for fifty years, but has confessedly failed to produce that desired result. The pendulum has already begun to swing the other way. The leaders of the so-called "practical" education, men of science, engineers, chemists, doctors, are calling now for students whose faculties have been trained in the discipline of the classics. The scheme that lately looked so practical, putting the useless humanities in the background as "mere culture" and holding good, plain, money-making ends steadily in view, has been weighed in the balance and found wanting. The greater part of the *School Review* for last June is given up to a symposium on the practical value of the classics as a preparation for the study of engineering and medicine. This discussion gives not the opinions of "unpractical" teachers of Greek and Latin, but the convictions of professors of medicine and of engineering in the University of Michigan. With one voice, they all agree that the student of engineering or medical science is poorly equipped with only small Latin, and that he might very profitably spend considerable time on Greek, before beginning his professional training. Engineering is the most practical of all the professions. There is no other that has so frequently, in self-complacent modernism, or so violently assailed the old regime and said: "Away with culture studies! Away with Greek and Latin! We do not need them any longer!" But now let us listen to a few sentences from Gardner S. Williams, Professor of Civic, Hydraulic and Sanitary Engineering: "There are those who urge that for the engineer the sciences offer all that is necessary, and that the time spent upon any language is wasted. The next step, after asserting that the sciences offer all that is needed, when that has been shown to be untenable, is to assert that modern languages will supply the deficiency, and we have the error of that idea before us in many of our present students. Any one who has studied the ancient languages feels that there is something very materially lacking in the groundwork of the modern languages. German and French seem like a child's production as compared with the structure of Latin. Nor can one properly understand English without an understanding of the Latin Grammar, though he should study it until he were gray. * * * There is nothing in which engineers to-day are so lacking as in the ability to express their thoughts; and there is nothing that will so surely give one such ability as the translation from a foreign tongue; and the more delicate is the distinction of meaning of different foreign constructions, the better it is for the student. * * * We find to-day that the students who are entering college do not seem to be capable, on the average, of such a high grade of

work as those who entered a few years ago. There seems to be a deterioration of the quality of mind, in its adaptability or its training."

The proper correction for these defects this engineer would find in the good, old-fashioned classical training, as the training that is most worth while.

Three other engineers speak in the same strain. Let me quote but one of them, Dr. Herbert C. Sadler, Professor of Marine Engineering:

"While not an exact science," he says, "the study of engineering demands definiteness and conciseness of thought, and one of the chief difficulties that those connected with the education of engineers have to overcome is a tendency on the part of the student to generalize.

"While it may be the opinion of many that the introduction of some elementary form of science may secure the desired training, I venture to suggest that, as a general rule, studies of this nature will have an effect diametrically opposite and lead toward vagueness rather than concreteness. * * * The time so spent would be far more beneficial, both for a general training of the mind and for forming a basis to further studies, if devoted to the humanities.

"As a means of inculcating ideas of exactness," Professor Sadler continues, "the study of the humanities is *facile princeps*. The niceties of translation, the importance of gender, number and case, the proper use of the moods and tenses, and the demands of the relative clause, compel the mind toward a certain definiteness which is lacking in many of the subjects taught in the early stages of education. The most simple translation, or even the study of the grammar of these subjects, demands a directness of attention and consideration of detail which cannot be otherwise than beneficial to a student whose work in the future will lead him into subjects where generalization is impossible."

And then he goes on to demand classical training for the engineer, not only for discipline, for training in clear, sharp, definite English expression, but also for clear and concise thinking along all the lines of his profession. "In the years immediately preceding the university," he says, that is, throughout the high school course, "the study of the classics (both Greek and Latin) is certainly most desirable. The university entrance examination is simply to show that the student has a moderately well trained mind; and I venture to suggest that the one who has devoted his time to the study of the humanities will be in as good a condition to absorb the university

work as one who has spent his time in getting a smattering of a number of subjects, some of which are practically useless."

If the desired results cannot be obtained with the present machinery, it might be a good thing to change the machinery. We at Tulane want our engineers to be cultured men not less than technicians. We insist upon it; and we overwork our candidates. So do most engineering schools. And one of the greatest and best, determined that it will secure that result, has been seriously considering the advisability of arranging a six-year combined literary and engineering course, as we have six-year medical and law courses, in order to give the student a broader education, with emphasis on the culture side.

And as the engineer without a classical training is, by his own confession, but half-trained, so the professors of medicine find the students who come up without Greek and Latin maimed and crippled for life. Hear a few words from Dr. Vaughan, Dean of the Medical College:

"No one can become a student of anything until he learns how to study. There has been found nowhere a better training for the thinking apparatus of the young than the study of Latin and Greek. The great number and variety in the inflections of noun and verb render close attention an absolute necessity, and this, in and of itself, is of the greatest value in an educational way. Carelessness and superficiality are incompatible with any thorough study of Greek and Latin. Besides, with the close attention that the student must give to the variations in the structure of words, he soon begins to perceive that these indicate variations in the shade of meaning, and then the joy of study takes possession of the student. His observation is sharpened, his perception becomes more delicate, he finds increased pleasure in the intensity with which he seeks fully and correctly to interpret his author's meaning. And this habit of close observation, of attention to detail, of looking for fine distinctions and shades of difference, and the alertness of mind possessed by individuals of this habit, will be of inestimable service to him, should he choose medicine as his profession, both in his experimental work in the laboratory and at the bedside of his patient. This point in favor of the study of Greek and Latin, it seems to me," says Dr. Vaughan, "is not easily overestimated. Indeed, the progress of medicine is determined largely by the accuracy and precision with which observations are made. The careless or the superficial man is not suited either to the practice of medicine or to the conduct of experiments for the elucidation of medical

problems. The best medical schools are rapidly advancing their requirements for admission and now demand from two to four years of collegiate work, while the academic faculties are filling these two to four years largely with loosely regulated electives; and I am by no means certain that the medical student of to-day has a better preparation for his professional study than his prototype of fifty years ago (who devoted many years to a thorough study of the classics). * * * It seems to me regrettable," he concludes, "that at least two years of good solid work in Greek cannot be demanded as an unconditional requirement for admission to our medical schools."

Dr. B. G. de Nancrede, the eminent surgeon, is even more pronounced in his demand for a classical training for medical men. He further declares that the physician never does and practically never can understand the language of his profession, unless he be trained in Latin and Greek. "The medical profession," he says, "is not merely employing Latin and Greek terms, using them at all times, but it is also coining them and often doing so very incorrectly. The way Latin beginnings have tacked on to them Greek endings has come to be an abomination. Such illiteracy is making a laughing stock of the profession in the opinion of the men of the most ordinary culture."

In these views, striking as they are, there is nothing, after all, very novel. They have been held by generations of school teachers and scholars. They have been only comparatively recently challenged, and that, too, by scientific specialists. And such speeches now from men who are specialists and scientists, coming so strongly and with such unanimity, are significant. The doctors scoff at school physiology and chemistry; the engineers make little of the scientific studies preparatory to the technological school; our science men at Tulane and elsewhere have always insisted that they would rather have boys get their first taste of their particular science after they come to college; the law professors would surely rather have a pupil who had had his fill of Cicero and Demosthenes and Thucydides than one who had made a premature acquaintance with the Civil Code or the Common Law. That is apparently the universal judgment of our fifty years of experimenting. We had to have that experience for ourselves. There was no escape from it. We had to find out from our national experience what would happen to us, though we might have learned the lesson a quarter of a century earlier from the same experience in Germany. In Germany the two kinds of education ran side by side in different schools—

the education of the humanities in the *Gymnasium* leading to the university and the education of the natural sciences and modern languages in the *Realschule* leading to the polytechnic institute. The *Realschule* dispenses entirely with Greek, reduces the time devoted to Latin by nearly one-half, doubles the time devoted to French, more than doubles that given to the physical and natural sciences, and increases that allotted to mathematics by nearly fifty per cent. This sort of preparation secured admission to the professional schools, but not to the department of Arts and Sciences.

In 1870 the government sent to the faculty of the University of Berlin a memorial asking why such a course of training as that of the *Realschule* should not contain the same elements of discipline that had hitherto been attributed exclusively to the classical languages, whose cultivation is the care of the *Gymnasium*. And if it did, must not the view that preparation for the university could be found only in classical studies be considered as superseded?

To those questions the united philosophical faculty of the University of Berlin replied that "the non-classical training is incapable of furnishing a preparation for academic studies equal to that afforded by the classical training; that all efforts to find a substitute for the classical languages, whether in mathematics, or in the modern languages, or in the natural sciences, have hitherto been unsuccessful; that after long and vain search we must come back finally to the result of centuries of experience, that the surest instrument that can be used in the training of the minds of the youth is given to us in the study of the languages, the literature, and the works of art of classical antiquity."

Let no one any more bring up the thread-bare argument that those other subjects would be as good instruments as the classics for mental discipline, if they were as well taught as the classics. If they are not as well taught in the German *Gymnasium* and *Realschule* as the classics are, it is useless to dream of their ever or anywhere being capable of such training.

In spite of the unanimous disapproval of the philosophical faculty of Berlin, including every man of science on the staff, the government threw open the doors of the university to the graduates of the *Realschule*. After ten years of careful experimenting with students who had had some Latin but no Greek, but, instead, some further training in science and modern languages, the foremost university of the world then unanimously sent up its unqualified condemnation of the change. The professors of natural and physical sciences and mathematics and modern languages and history and the rest,

without one dissenting voice, declared that, in spite of the start gained by the students of scientific preparation, they were, as a rule, easily overtaxed in the later semesters by the students from the *Gymnasium* and soon left in the rear. Said Dr. Hofmann, Professor of Chemistry: "For perhaps one semester the men from the *Realschule* may lead, in consequence of their being familiar with a large number of facts, but the relation is soon reversed, and, given equal abilities, the latter almost invariably carry off the honors in the end. The classical men are invariably better trained mentally; they are superior in scientific impulse and apprehension; they have acquired in a higher degree the ability to understand and solve scientific problems."

Others—scientic men, I would remind you—declare out of the richness of their ten years' experience, that it is impossible for one who has been prepared at the *Realschule* to acquire a satisfactory scientific education. And so at the end of that period of probation, the faculty again unanimously petitioned the government to repeal its decree and to admit to that department only such students as had received the thorough discipline of the classics, as the only adequate training for university study. Appended to that petition you may find the names of Liebig and Helmholtz, Hofmann and Rammelsberg, Mommsen and Curtius, and all the rest.

The pendulum is swinging back once more, you see. And in our country, too, there seems to be a general feeling that, as a result of the so-called "new education," the thinking power of students and their willingness to undertake hard tasks have distinctly lessened in the last few decades. The old attitude of hostility to the classics is changing. That same Charles Francis Adams, who so mercilessly "flayed" both Greek and Latin twenty-three years ago, now laments that he did not get more training along those very lines; he is now even ready to "prescribe one of the classic tongues, Greek or Latin, as a compulsory study to the day of graduation (for every student in college), the one royal road to a knowledge of all that is finest in letters and art." The feeling is general that there is among students to-day more effort after accumulation of wisdom, less after training for its own sake. What have we been going to school and college for? To learn. To learn what? Facts, figures, dates, substances, thought? Not at all. But to learn what there is to learn and how to master it—to acquire the control of every faculty for the quick acquisition of knowledge, to secure the culture of soul and the training of mind needful for the highest degree of usefulness in life. The amount of information that the best student

absorbs during his student days is, after all, but a pitiful fraction of the sum of human knowledge. A great deal of it will very likely cease to be accepted as accurate information even before he has graduated, particularly if it is along any of the scientific lines. That is true even of engineering, the most avowed bread-and-butter education, the most specialized training of all. We ought, therefore, to look more to culture and careful mental training.

Now, I have not meant to advocate any system of education that will make of men's minds great "rag-bags of useless information," or that will sacrifice thoroughness to extensive attainments. But I do mean that no one can make a reasonable claim to true culture who has neglected either "the great vistas of the works of God," or "the everlasting consolations" of the Greek and Latin classics, or the realms of ideal beauty created by the divine souls of God-inspired men of other times and places. Let the real "new education" be the culture of the humanities *plus* the training of the scientific method.

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*Practical Education.**

By James Edwin Addicott.

In all stages of human development education has consisted very largely in the adjustment of the individual to his physical, intellectual and spiritual environment.

Previous to early Grecian education the paramount emphasis was placed upon adjustment; beginning with the age of Pericles stress has been laid alternately upon the individual with his rights, on the one hand, and upon adjustment on the other hand, which would ignore the individual for the perpetuation of society as a whole.

Educational ideals have swayed back and forth between these two ideas, (1) of *training the individual,* of giving him full opportunity to develop his intellectual resources, and (2) of compelling him to conform to society's standards.

When the individual is given full opportunity for working out his own ideals, regardless of traditions of society, we find great improvements and inventions resulting, though oftimes with concomitant errors and failures.

When, however, we see the emphasis placed upon adjustment to

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*From address before N. E. A. by J. E. A., '99.

pre-established law and custom, as is the case in Chinese and oriental education, there is a decided lack of progress.

Consider for a moment the characteristics of the social organizations of the Chinese. The family is the unit of the state and the foundation of Chinese education. Individuality does not exist. Custom and obedience to the father rules every act; the son must even suffer for the father's crime. Thus there can be no real conception of justice between individuals based upon motive. All relations are definitely settled by rule and law. Individual consideration and reason are thus unnecessary; blameless and intentionally harmful acts are punished alike, for motive and intention are ignored and only the external results of the act are considered.

Education is merely the instruction of the young in how to live up to the principles expressed in Chinese law. It is the simple process of memorizing rules of conduct which were laid down by Confucius and other law-givers of the Empire. What is or has been is considered right; and education consists in directing the young along the beaten paths.

There is thus no spirit of investigation; no science, only a knowledge of science; history is wholly a record of facts; ethics only memorized precepts; religion an external observance of ethical principles.

The aristocracy, public officials and statesmen are rewarded by high offices according to the degree of success attained in memorizing rules of conduct and perpetuating the old customs.

The stability of the social order of China is thus assured. They thus accomplish their ideal of preventing any change.

Contrast the non-progressive methods of the Chinese with the ideals of Grecian education immediately preceding the age of Pericles.

Chinese education was dominated by obedience to custom, Greek education by nobility, worth and virtue which bound the individual to the city state for mutual progress and mutual benefits.

In contrast to Chinese customs we find the Greeks stressing the motive rather than the result of an action; thus personality counts. Again Greek education tended toward definiteness and concreteness and thus rounded out the precepts into acts. While it is true that Spartan education culminated in military excellence; on the other hand, Athenian ideals tended to intellectual supremacy, and this the real meaning of Greek education. The Greeks aimed at a liberal education. It is safe to say that Grecian art, architecture and

statesmanship far surpassed America's present culture as derived from the so-called educational institutions.

Greek education was active participation in life work; American education is too largely a *preparation* for life's work.

The development and rapid progress made by the Greeks just before and during the age of Pericles was due to the rapid shifting of the educational purpose, *from* the adjustment of the individual to social customs and traditions, *to* the purpose of allowing the individual every opportunity to develop his abilities in any way whatsoever, if not inconsistent with the absolutely necessary requirements of the state.

The Greeks made the transition from the ideal of *adjustment* to that of individual progress too rapidly for the safety of the state. It was found necessary later to emphasize the adjustment side in order to secure responsibility and loyalty to the state. They found it necessary to check the eccentric desires of the individual for the benefit of the state. They saw clearly on the other hand that no *progress is possible without individual liberty.*

Let us consider for a moment America's educational ideals with reference to the two extremes of absolute adjustment on the one hand and individualism on the other hand.

Educational ideals in the United States are still very largely moulded by medieval ideas and customs; in other words, the adjustment to fixed ideals in education has not been sufficiently relaxed to allow the fullest possible development of the individual. Our national and educational ideals are and have been democratic; but our methods and subject matter have not yet thrown off the shackles of tradition, and we find ourselves still teaching some things that are well nigh worthless. Few of us have the courage to eliminate old and valueless matter, and to appropriate of the new what is useful and vital; nevertheless this is one of the tests of good practical instruction.

A teacher with a well defined purpose, with a reason for all instruction given finds it necessary to constantly eliminate much of the old and as constantly to accept new ideas and processes. It is the less efficient teacher who has no aim beyond instruction in the prescribed course, who is afraid to eliminate minor details, who stresses the absolute facts of knowledge rather than their bearings upon the world's progress, and who consequently retards the coming of better and higher ideals.

While we all agree that the ideals of medieval education can hardly be considered practical at the present time, nevertheless,

medievalism continues in both the method and the content of education, and often stands in the way of progressive and practical work. The weakest and most impractical and absolutely useless work in our schools has been and continues to be defended on the grounds of faculty training and preparation for higher and more advanced courses. Stressing the value of preparation for life work has resulted in mere preparation. Education is participation in the life of the race, and this participation should begin in the kindergarten and each succeeding year should have its full supply of exercises and opportunities for participation in life work. Each year in the grades or in the high school should be as essential to the development and life of the student as any year spent in the university. When the various phases of education are thought to be mainly or wholly a preparation for something beyond, something better or higher, there readily develops a tendency toward formal work, toward getting the pupils quickly over the ground and toward the omission of essential thought processes.

If participation becomes the leading ideal, we find action, experience, clear thinking and practical work at the basis of instruction. Whether preparation or participation is the dominant aim will depend upon our conception of the real purpose of education. Is it simply the training of the mind? Is it developing harmoniously all the faculties? Is it simply learning the contents of a logically organized text? Do we teach mathematics that the student may acquire the power to solve problems? Do we teach mechanical drawing to develop accuracy and forging to develop dexterity? Do we teach Latin that the student may gain proficiency in reading and writing the language and thus be able to teach the same to others? Do we teach ancient history solely for the culture it offers?

To my mind these are all narrow purposes and result often in impractical efforts both by the instructor and the student.

The meaning of such terms as mental discipline, culture, harmonious development and training the faculties is certainly indefinite, if not misleading. Educators have used these terms much as scientists use terms which cannot be satisfactorily defined. For instance, when the chemist finds two elements combining under conditions and in ways which he cannot understand or explain, he gives for his reason chemical affinity; when the astronomer is estimating the distance of a remote star whose parallax cannot be found even by the most delicate instruments, he says the distance is infinite; the biologist who has no idea of the numbers or size of

the newly discovered microbe assumes the semblance of knowing by explaining them to be a size which is infinitesimal.

We teachers have used many psychological terms in this same vague and meaningless way, and our aims have consequently been uncertain and far from the real issues to be sought after.

The pupil who gets nothing but mental discipline and trained faculties for all his school efforts is not very likely to appreciate his educator. He feels much like the man who was given the work of carrying bricks from one side of the road to the other on the first day; on the second day he was told to put them back where he found them, on the third day to carry them across the road again. The workman was getting excellent physical training and good wages, but gave up his work because it had no purpose in it that was worth the effort.

Our school work may be just as unsatisfactory to the pupil if there is not a purpose in it which he appreciates as worth his time and effort. The pupil must have motive, interest and a definite purpose if his school work is of real profit to him. *We must judge the value of a subject by its worth in usefulness and character building.*

In its efforts to secure mental discipline, medieval education became interested in absolutely valueless topics; such as, how many points in a row are required to form a line one foot long? How many angels can stand on the point of a needle? etc. These hair-splitting controversies have no real content and lead to nothing definite or useful. Many of the arithmetical, grammatical and algebraic exercises in our schools today are no more conducive to the proper sort of mental growth leading to real life problems than the medieval proposition of "how many angels can dance on the point of a needle."

Psychological thought has just passed through the crisis of the faculty training theories and is rapidly being replaced by sociological ideals. In other words, there must be a purpose in the training of the individual, and that purpose is social progress—not social stability.

The training of faculties for mental discipline was wholly a psychological problem; the mistake has been in assuming that psychology could determine the aim and content of education. Psychology can tell us how to adapt subject matter to the child's peculiar mental state—that is, it can teach us method; it cannot tell us what to teach. We must look to sociology and philosophy if we would get our aim and purpose and subject matter.

The educational ideal has shifted; we look not so much to text books, not to the teacher, not to the rich heritage of the past; rather, we look out broadly upon the many needs of society and to the great industrial and commercial enterprises if we would know just *what is best to teach.*

The thoughts contained in texts, the ideas of the pedagog, and the ideals of past generations are to be accepted only as they serve to fulfil society's present plans for physical, intellectual and religious attainments and needs.

The present tendency to introduce art, manual training, nature study and gymnastics into the already crowded curriculum of our public schools is due to this broader view of education, thoroughness and culture. All these subjects touch in a vital way the very heart strings of every boy, girl, man and woman. Each of these branches is related in some way to every other subject in the curriculum, and by denying any one of them a place in the course of study we only weaken that course and consequently the pupil; for we are thereby cutting off the full supply of experiences which give life and motive to the thoughts and actions of normal children.

The instructor who objects to these modern subjects on the ground that there is not even time to teach reading, writing and arithmetic thoroughly, is like the farmer who spent all his time plowing, harrowing, irrigating and fertilizing; but, as he never found time to do these things thoroughly and perfectly, he therefore objected to planting any seeds.

This school work that is always *getting ready* for life and forever says to the child don't touch life until you are thoroughly prepared by studying text books, is like the experience of the farmer who refused to plant seeds until the propitious time had passed, or like the boy who was trying to swim before venturing into the water.

I have little appreciation for that form of education which is based wholly upon a preparation for life; if school work isn't life, and life work, it isn't worthy the name of education. Education means life in its broadest sense. The life of every boy and every girl is an unfolding, a growth, a participation in some form of life's duties and the process is internal application, not external. We have looked upon the child too much as we would look upon a watch with all its wheels, springs, screws and cogs, thinking that as the watchmaker may adjust and lubricate till the perfect time piece is produced, just so the teacher may force his ideas and impressions upon the child, regardless of the child's aptitudes, previous experiences or attainments. If this theory were true, we would have found

the perfect man long ago. We will make educational progress faster and more natural by thinking of the child rather as a plant which does and must develop largely according to its natural inclinations. We can nourish, protect and guide, but we cannot safely force either the growth of the plant or the development of the child.

Let me repeat that to-day education means social efficiency rather than individual attainments; it means a preparation for and a participation in the life of the race.

There is a profound significance to this change from the development of general powers of the mind by specific and narrow means to a plan which aims to make each phase of school life a phase of real life. The facts of the outer world should be brought to the school, even if they are not found in text books—even if they must be only in miniature.

So far as possible subject matter in the school should stand for all phases of human culture, and I include manufacturing industries and agriculture as phases of human attainments.

If we admit that the educational ideal should shift from the individual efficiency to efficiency in social life; then we must admit that education is a greater, broader and nobler work than merely studying and reciting lessons. Efficiency in social life means power to plan and do things, while efficiency in the individual requires much less of positive knowledge and action, leading naturally to the formalities of book work and school room recitations. From the pupil's standpoint, school work should consist of a series of life problems which are real and meaningful.

Without the interest, motive and reason of the pupil we can accomplish little more than that form of learning which G. Stanley Hall calls "baled hay education." It seems to me that this phrase "baled hay education" expresses exactly the results of one of the weakest phases of our school work. I refer to the memorizing and cramming process so prevalent throughout the country which wastes the time and energy of supervisors, teachers and pupils. We give our pupils so much to memorize and recite that they have not time and energy to *think*, to *work out problems* and *do things*. To make the examination the chief end of the educational process is to crush out the love of real study, the enjoyment in independent thought and the relish accompanying the solving of some of life's problems.

The cramming process, this "baled hay education," with the accompanying rivalry for the highest per cents, for prizes, and for

the glory which comes to the one who has defeated the others in a purposeless and useless race, is conducive to the development of vanity and selfishness and should be replaced by a purpose which is nobler and altruistic.

The examination system sets up false ideals and emphasizes too strongly the memory of facts and offers no reward for judgment and power to plan and do things. In adult life success depends upon the *use* of knowledge and abilities; no reward is given for merely knowing. A child who is led to believe that the accumulation of facts is the good education has a false notion of his mission in the world.

All the misers are not seekers and hoarders of money; some are after facts and knowledge with no other purpose than that of hoarding. This is both narrow and selfish. Knowledge unused is of no more value than gold hidden in the earth. Religious precepts, moral principles and educational processes are of value only so far as they affect our acts, only so far as they help us to live nobler and more useful lives. We should teach our pupils how to use knowledge, how to study, how to solve life's problems and how to do things. The motto of the teacher should be, "Train for social service;" this means unselfishness, nobility and character.

It seems to me that both the methods and content of education as used in the schools of our country to-day are unnecessarily formal and uninteresting. This is due largely to custom, partly to ignorance of the real purpose of education, partly to the assumption that the adult mind and the child's mind are about identical in interest and tendencies, and largely because the instructor falls back into a rut of past experience, which offers less work and fewer difficulties than a more aggressive and progressive disposition would be likely to encounter. In order to contrast more clearly the formal and passive phases of education with the more progressive active forms, it may be well to refer to some of our ablest educational philosophers for the meaning and aim of education.

Nicholas Murray Butler, President of Columbia University, says the aim of education becomes the shaping and guiding of the development of the child towards adaptation to and appreciation of his many-sided environment. But it is not passive adaptation only; it is an adaptation which includes the development of efficiency, or actual capacity to mold and shape the environment rather than be hedged in and crushed by its capacity to move forward, in other words; and an adaptation which includes the growth of that subtle power in the individual himself which is character. If we give the

name, culture, to a rich and rounded knowledge and appreciation of the five-fold spiritual environment, then the aim of education is, always protecting health, culture, efficiency and power.

Dr. John Dewey writes as follows: "We do not and cannot know what a child's life will be, either industrially or in its social quality. To attemp to educate him upon the basis of custom means to educate him for the present and then when the future comes upon him leave him either stranded or wrecked. The only way to educate him for the flexible future is to give him the utmost command of himself and of the methods of civilization. Only, in other words, by giving the child command of himself now, and by giving command of that self through the command of the fullest, most complete, existing tools by which civilization makes progress, can we prepare the child for his future place, his future work."

Dr. Dewey further states that "the controlling factors in the primary curriculum of the future are to be manual training, science, nature study, art and history. These keep alive the child's positive and creative impulses and direct them in such ways as to discipline them into the habits of thought and action required for effective participation in community life."

To quote from Wallace's Lectures and Essays on Natural Theology and Ethics: "Mental health and wealth do not depend on a mere accumulation of single facts, but on solid ideas of what life is and ought to be, and what the world around us really means; it does not lie in confinement to a fragmentary life, limited in its range of view, and moving forever in the same monotonous routine, but in a large and free scope of experience. The true ideal of a fully developed personality does not consist merely in a keen intellectual acumen, not in an intense but inactive susceptibility to the moods of happy feeling, nor in a perpetual unresting activity; it involves a balance of all these elements."

A rational balance of the intellectual, spiritual and physical elements for the purpose of effective participation in community life is a comprehensive expression of the progressive aim of modern education.

All general life processes are changing, whether they be physical, intellectual or spiritual, and the teacher's duty is to attain higher ends than present acknowledged needs. It is human nature to want to deal with definite settled problems, and this one trait on the part of the school teacher may result in thwarting the highest purposes of education by emphasizing the formalities of school life and work, rather than real life issues. A lifeless stone is given

when bread is asked for. Under the guise of thoroughness, children are kept picking over the chaff in the endeavor to save every kernel; they are told that future success depends upon finding the last kernel, that blowing chaff is the best preparation for the bread-making process. Is it surprising that so many boys and girls leave school because they want to see and know something of the milling, the mixing, the cooking, yes, and the tasting processes?

Is the comparison overdrawn? Allow me to read twelve criticisms on the written work of a high school class in literature, and you may judge for yourselves.

1. Improperly arranged title.
2. Poor paragraphing.
3. Incorrect spelling.
4. Illegible writing.
5. Smeared and slovenly appearance.
6. Follows the outline too closely.
7. Written on both sides of the paper.
8. Not punctuated properly.
9. Words repeated too often.
10. Pronouns not corresponding with antecedents.
11. Sentences should be shorter and simpler.
12. Too abrupt a beginning.

Out of the twelve there is not one thought provoking criticism, not one constructive or encouraging criticism, not one which shows an aim beyond the school room. This is not participation in the life of the race, it is not even a creditable preparation for life work. And still this is what we teachers are doing unconsciously day by day.

When we compare the amount of formal, lifeless work with the real constructive thought-provoking work in our schools, we can see the necessity of constant care to keep ourselves free from the merely formal and traditional.

To avoid the formal, to keep out of the school teaching ruts, it is imperative that the teacher have a purpose outside of, beyond and higher than the aims of the school room recitation. It is sometimes assumed that manual training and mechanic arts teachers are less formal than teachers of so-called academic work; this may or may not be the case. Because there is more activity and physical training and less of purely brain work, it does not necessarily follow that hand work is more interesting and truer to life.

Mechanical drawing and manual training are often extremely

formal, there being a maximum of effort at hand skill per se, and a minimum of thoughtful efforts.

In its infancy drawing as a school subject required the pupil to try for hours to produce free hand a straight line or a circumference as perfectly as with the straight edge and compasses. After many lessons of tedious effort the pupil was required to combine curved and straight lines into various forms that were in no sense useful or beautiful. Thus the imagination and the inventive faculties were supposed to be developed.

The same theories were applied in the early manual training and technical schools, where the boys were kept for months making joints and exercises with no higher purpose than that of acquiring hand skill. They were supposed to get their faculties and powers developed in the formal exercises; the idea of making useful and beautiful things was not thought to be educational. In fact, the real practical aspects of education were not clearly understood by the early manual training schools.

Let us now consider what is meant by the practical in its relation to the theoretical. All phases of education may be said to tend either toward the theoretical or toward the practical. At present the tendency away from the theoretical toward the practical commands universal interest and thought. How to harmonize these two tendencies of education is the supreme task of the student.

An attempt to separate wholly theory from practice would diminish the efficacy of both. It is impossible to decide which is of more importance because in a broad sense neither theory nor practice exists separately. They are independent and fundamentally related and should not be so commonly contrasted as is customary in educational work. Contrasting the elements of theory and practice is of much less importance to the educator than a clear and definite knowledge of their inter-relationship.

The wisest theorists recognize the importance of testing their theories by trying them to see if they will work. Likewise the most practical and successful men of affairs realize the importance of comparing results with the theories and works of others.

If asked which of these two educational elements is of greater importance or which should receive the larger share of time, I would unhesitatingly answer the theoretical. This does not in any sense minimize the importance of experience and practice. A practical education is needed to supply experiences, for the great majority of students are learning theoretical knowledge far beyond their ability to plan or to do. It is commonly assumed that a practical

education, including cooking, sewing, carpentering, forging, stenography, bookkeeping, etc., must be hostile to the regular traditional work of our established schools. If any one present holds this view, then what I shall say may prove disappointing, for my conception of a practical education is simply education in its broadest aspect, its best and most useful forms. To me a practical education simply recognizes the educational value of experiences and practices and gives them their rightful place and time in the curriculum of our schools and colleges.

A more vital question for modern educators than the relation of theory to practice is what are we to do with the old-fashioned, formal, lifeless, traditional learning that it may take on a more progressive, modern and practical form? We probably all agree that a practical education must of necessity be modern; that is, it must lead to the professions, vocations and industries of the present time and the immediate future.

Do we agree on the question of what constitutes a practical, modern education? How may we know that a man has a practical education? In short, what is the test of an educated man?

In Germany, the test is made in answer to the question, "What does he *know?*"

In England, "Is he a good fellow?"

In America, "What can he do? What service can he render?"

The German and English test, "It will be seen," are incorporated in the American ideal of service; for the man who renders great service must possess both brains and character; he must be a man of knowledge, and also a fellow whose companionship is worth while.

The ideal education of America should produce men of action, men of achievement, men who get results, men who can plan and execute.

If we agree that the real test of the educated man is his worth as a citizen, his efficiency as a member of society, then it naturally follows that the best, the most practical education must at least aim at his ideal of usefulness.

If less emphasis were placed upon the theory of the harmonious development of the faculties, and less upon this false notion of thoroughness, and more time were devoted by the teacher to the study of life outside the walls of school-rooms and colleges, to the study of the world's needs and the world's work, we should have a clearer vision of our duties as educators and would find it easier to depart from the beaten paths.

We are creatures of habit, with the imitative instinct strongly

developed, but God has given us the reason to guide, and will to do. Why should we continue in the formal work when we believe in the practical?

Why should we teach what is not likely to make for character and social efficiency when there is so much that is meaningful and worth while, and is more closely related to the world's work? This is what happens when we teach subjects and lose sight of the present and future needs of our pupils.

It is an excellent quality to be able to teach a subject thoroughly and logically, but it is a higher and nobler thing to train men for efficient living.

If we teach the *subject,* we may or we may not be practical. If we teach the student, we cannot be impractical, for we help him to think, to act and to live.

The question arises naturally, "How can you teach the student without teaching subjects?" In a narrow sense, you cannot, of course. But it makes a vast difference where the emphasis is placed. It makes all the difference between the old, formal, lifeless education and the new progressive life enthusing work of modern schools, whether the emphasis is placed upon the subject or the student.

In conclusion, a practical education must keep pace with the rapid strides of the twentieth century progress; it must aim to make self-directed and self-determined men; it does not confine its whole attention to the five out of one hundred whose education is mainly theoretical, but reaches out also to the ninety-five who live by practical labor.

Any earnest student of the times must see the necessity for wider knowledge, for a more varied education, for stronger self-reliance and for greater determination and power of self-help than have been given by the old methods of education. The population of the civilized world is increasing rapidly, competition is becoming keener and closer. There is a demand for an education that not only gives scholarship, but prepares for citizenship in relation to life work. We have had much trouble with workers who will not think. We may have more serious difficulties with the thinkers who will not work.

"The worker should be enough of a scholar to respect the scholar; the scholar should be enough of a worker to respect the worker. The dignity of intelligent hand work should be appreciated by parents and educators. If the educational leaders of this great republic *refuse* to acknowledge industry as in every way honorable,

and continue to idealize scholarship as the only attribute of mankind worth striving for, we may never hope for that sympathy, that mutual respect, that good fellowship and brotherly love, which should characterize Americans."

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H. ELMER BIERLY

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An Explanation.

On account of labor difficulties in the printing establishment which formerly printed this publication, the April-May and June-July issues could not be published before this date. This explains why we are making a double issue of this number. The magazine is not published during August and September, as these are vacation months. The October-November issue will appear in a few weeks. We greatly regret this delay, but we will catch up shortly with all past issues.

Meeting of the Southern Educational Association.

The next meeting of the Southern Educational Association will be held at Lexington, Ky., during the Christmas holidays. Kentucky and Lexington showed what they could do by way of entertaining educators at the meeting of the Conference for Education in the South, nearly two years ago. The President, Superintendent R. J. Tighe, of Asheville, N. C., is making special effort to make this one of the very best meetings; and, judging from the present indications, his hopes will be realized.

Meeting of the Southern Association of Colleges and Preparatory Schools.

The next meeting of the Southern Association of Colleges and Preparatory Schools will be held at the University of Georgia, Athens, during the first week in November. This no doubt will be an important meeting, as the subject of college credits will be discussed, and probably something more definite be determined.

Book Reviews.

Elementary French. By Fred D. Aldrich, Master in Modern Languages in Worcester Academy, and Irving Foster, Professor of Romance Language in the Pennsylvania State College. 12mo. Cloth. 329 pages. List price, $1.00; mailing price, $1.10. Ginn & Co., Boston, Mass.

An outgrowth of "Foundations of French" by the same authors. The scope and the general arrangement of the earlier volume, which have met with such general approval, have been retained, such incidental changes in the text being made as class-room use has suggested. The important new features consist in the addition of French-English exercises, the extension of the English-French work along the lines of simplicity and variety, and the insertion of complete vocabularies. Phonetic transcriptions, drill sentences culled from college entrance papers, and a concise syllabus of essential grammar are to be found in the Appendix. In general the book will furnish an effective introduction to the French language, and incidentally it covers fully the elementary requirements in grammar and composition. Teachers will find that the abundant exercises adapt it to the needs of students in the first year of high schools, while, by making suggested omissions, there is offered a concise course suitable for more mature students and for those with less time at their command.

Scott's Ivanhoe. Edited for School Use by W. D. Lewis, Head of the Department of English, High School, Syracuse, N. Y. Required for Reading by the Conference on College Entrance Requirements in English. 16mo. Semi-flexible cloth xx—|—536 pages. With frontispiece. List price, 50 cents; mailing price, 60 cents. Ginn & Co., Boston, Mass.

The distinctive feature of this edition is the editor's plan for making the study of Ivanhoe a happy and valuable beginning for the pupil's training in literature and composition.

The Introduction is in two divisions; the first is a biography of the author, which relates the chief events of his life, and at the same time gives an inspiring glimpse of the splendid spirit of the great romancer.

The second is called "Ivanhoe in the Class Room." It contains

valuable suggestions to teachers for conducting a systematic and entertaining study of the work.

Under this head the elements of the novel, plot, characterization, and setting are clearly defined and illustrated. The plan for topical recitation affords an opportunity for beginning that much-neglected branch, oral composition. In order to select the topics and to prepare for the recitation the pupil must read with care, and must arrange details so that they shall heighten the effect of the story he purposes to tell.

Especial attention is called to the written work suggested. It is an entire departure from the method of merely reproducing a story so well told by the author as to be the despair of his youthful imitators. In the suggested topics the pupil will find a stimulus to his invention and an incentive to the discovery of literary material in his everyday environment.

The needs of the first-year pupil in the high school have been kept in mind throughout.

Selections from the Greek Lyric Poets, with Historical Introduction and Explanatory Notes. Revised Edition. Edited by Henry M. Tyler, Professor of Greek in Smith College. 12mo. Cloth. xxiv—|—191 pages. List price, $1.00; mailing price, $1.05. Ginn & Co., Boston, Mass.

The lyric poetry of the Greeks is peculiarly expressive of their thought and character, the spirit which shaped their development. It is characteristic of this form of literature that it is reflective and self-conscious; it gives utterance to the thought and sentiment which underly and mold the life. Although only disconnected fragments of Greek lyric poetry are left to us, these bits of polished workmanship still reflect very much of the world from which they came. A text-book can give but a few examples of what we have, but it is hoped that it may call attention to their significance, and serve as a valuable introduction to these exponents of Greek life.

The book is intended for college students in their first or second year. The text is, in the main, that of the fourth edition of Bergk's *Poetae Lyrici Gracci.* It has been the aim of the editor to give such notes as are requisite that the student may understand the text, without extending them to such a degree that they will not be generally read.

The addition of selections from Bacchylides and a few other short

poems, and the inclusion of more illustrative and parallel references in the notes, characterize the new edition of this text.

Livy. The War With Hannibal. Edited by Edward Ambrose Bechtel. Chicago: Scott, Foresman & Co. Pp. 174. 60 cents.

School editions of Livy seem to be multiplying, in spite of the fact that the great historian of Patavium, who wrote the most rhythmical, graceful Latin prose we have, has fallen somewhat into disfavor of late as a text for college freshmen. The reasons are many. Freshmen usually make unreasonably hard work of Livy's fine periods, and his rhetorical skill palls upon them. His diffusiveness is discouraging to immature students. They find that after they have worked hard for half a year, they have barely covered one of the 142 books that Livy wrote, and that the end even of the Second Punic War (if they begin in the conventional way with XXI) is still some ten long books away. That alone is disheartening to the student ambitious to know from his Latin reading something of the course of events on which he is working. To prevent that apparent futility of long labor on the part of the younger student and at the same time to give him an acquaintance with the most delightful narrator, the most candid judge of events and characters, and the most eloquent of all historians (as Quintilian calls him), Professor Bechtel has given us, in 160 small pages of selections from the second "Decade," an abridgment of Livy's story of the Hannibalian war. The only objection to this method of selections is the objection to all "sampling." It is as unfair treatment of Livy as the abridged *Robinson Crusoe* and the *Cloister and the Hearth* to their authors. The reader may get the story, but he does not get the author's work of art. It fails to satisfy.

This little book is avowedly a school edition and makes no show of scholarly erudition; its aim is to help the student, not the teacher. The introduction, therefore, is brief; it devotes but one page to Livy's life, four to a sketch of his great work, two to his language and style.

The text (which is, with a few unimportant variations, that of the Muller-Weissenborn Teubner text) is printed in large, clear type. Misprints are rare; but many wrong divisions of syllables escaped the proof-readers' eyes, e. g., *sim-ulans* (p. 26), *liques-centis* (p. 35), *sus-tinere* (p. 38), *pug-nare* (pp. 52, 58, 61), *max-ime* (p. 56), *vas-tando* (p. 58; cf.), *maie-statis* (p. 57) *and indu-stria* (p. 59), but *migi-stri* (p. 70), *facil-ius* (p. 93) and many more;

tran-sitio (p. 77) and *Hispan-isque* (p. 82) are perhaps the worst. It also detracts from the artistic appearance of the book's typography that on no less than 34 of the 160 pages of text, the last word is divided between the pages.

The notes—unfortunately at the bottom of the page—are concise and helpful. Rarely are they faulty, e. g., XXI, 31, 7: *iter Alpesque Hendiadys;* probably not so, in view of the following appositive: *dicianis* (XXI, 63, 5) is a strange "possessive genitive." *Ariminium* looks like a misprint (XXI, 63, 2).

The comparatively few translations are generally felicitous and afford help where help is needed.

The addition of a few maps and plans of battles would have enhanced its convenience as a school book; the young student may be referred to good reference books, but he doesn't often go, unless he has to.

WALTER MILLER, Tulane University.

Thought and Things: A Study of the Development and Meaning of Thought, or Genetic Logic. By James Mark Baldwin. Vol. I. Functional Logic, or Genetic Theory of Knowledge. London: Swan, Sonnenschein & Co. 1906.

For some time past the precise status of logic among the philosophical disciplines has been uncertain. It has long been evident that a "new" logic was imminent, and at least three tendencies of rather radical development have been manifest: First, the interpretation of logic on its formal, apodictic side as mathematical, issuing in the so-called "symbolic logic." Second, the direct evolution of logic into theory of knowledge and metaphysics. Third, the psychological tendency which proposes to evolve regardless of formal traditions a logic of its own on the basis of introspection and genetic theory. The first and second of these tendencies have perhaps reached their limited development. The third is just asserting itself, and, with the impetus of the dominant functional and genetic psychology at its back, bids fair to revolutionize logical theory as neither of the other two tendencies could.

The work of Baldwin, which we have here occasion to note, marks undoubtedly the first monumental treatise on this relatively new theme. It is planned for three volumes, only the first of which has yet appeared. A satisfactory and thorough going review is, therefore, at present impossible. The work seems to form a fitting culmination to the several valuable treatises on the development of

mind which the author has already published. But to one who is not entirely familiar with these, the present volume is not easily read or in its details easily understood. Even aside from this fact, the problem of tracing the development of thought and meaning from out of the most primitive and vague manifestations of consciousness is one which by its very nature must meet with direct resistance in the use of traditional language forms as mode of expression. Everywhere these forms suggest and associate the naive dualism of the natural mature mind. This resistance is doubtless responsible for the author's many circumlocutions and rather elaborate terminology. Until one can make both the point of view and the terminology one's own, the work must remain in a high degree "caviar."

With all its difficulties, however, the present volume reveals a vast store of well digested material, a broad and fundamentally sound logical method and a serious endeavor to replace the old formal epistemology and metaphysics by a natural, genetic treatment of mental development and "Weltanschauung." The general trend of this development is from the "achievements and embarrassments which motive the great dualisms of Substance and Reflection," to the profound Aesthetic Experience, where we find a "synthesis of motives, a mode in which the strands of the earlier diverging dualisms are merged and fused." With unusual interest we shall await the completion of this work since it is bound to mark a decided advance in both psychological and logical theory.

ROBERT MORRIS OGDEN, University of Tennessee.

THE PLANT WORLD.

The Plant World is a magazine under the editorship of Professor Francis E. Lloyd, of the Desert Botanical Laboratory, Tucson, Arizona. It is published by the Plant World Association, a group of eminent botanists from various parts of the United States, representing all fields of botanical science. Among these are numbered Dr. D. T. MacDougal, of the Desert Botanical Laboratory, Tucson, Arizona; Dr. N. L. Britton, of the New York Botanical Garden, New York City; Professor C. A. Arthur, of the Purdue University, Lafayette, Indiana; Professor J. J. Thornber, of the Agricultural Experiment Station of Arizona, and a number of others.

This magazine contains a large amount of very readable matter of prime interest to all teachers of natural science, especially botany. The articles published in it deal with the livest subjects of botany,

which are handled in the light of modern research, and in non-technical form. It is, moreover, beautifully illustrated, and the illustrations alone are of very great worth to every teacher of botany. The February issue contains an article on Hybrid Oaks by D. T. MacDougal; some notes of travel, relating to botanical gardens in the Orient, by Dr. Pehr Olsson-Seffer; a paper on the flowering periods of Cacti by Professor F. E. Lloyd, and a large number of notes and news items. Those who desire to examine this magazine may receive a copy free of charge upon application to the managing editor addressed to Tucson, Arizona.

Magazine Articles of the Month

EVERYBODY'S MAGAZINE.

APRIL—Romances of Success, Latzke; The Secret of Serenity, Canfield; The City of New Orleans, Bailey; The Fight at Tonopah, Beach; The Adventurer, Osbourne; The Quarantine at Alexander Abraham's, Montgomery; The Growing Railway Death Roll: Who is Responsible? Snyder; The Harder Case, Chamberlain; Parson Smith, Rogers; Master Artists of the Piano, Huneker.

MAY—What Good Does It Do? Whitlock; The Barrator, Rowland; The Snow-Shoe Rabbit, Seton; The Terrorists, Scott; The Harberdier of the Little Rheinschloss, Henry; Modern Masters of Music, Gilman; The Return of Endymion, Gale; Daly, the Troubadour, Browne.

THE BANKER'S MAGAZINE.

MARCH—Wall Street and Lombard Street, Lawson; Bank Directors, Their Powers, Duties and Liabilities, Crawford; Legal Decisions of Interest to Bankers; Proposed Changes in Banking Laws; The Extension of American Banking, Conant; Modern Financial Institutions and Their Equipment.

APRIL—Stock Shares of Private Corporations, Van Deusen; A Practical Treatise on Banking and Commerce, Hague; The Jamestown Exposition, Graves; Banking and Commercial Law Decisions; Money, Trade and Investments.

MAY—The Economic Benefit of Investment Abroad, Conant; Frauds, Forgeries and Defalcations, Hague; Stock Shares and Private Corporations, Van Deusen; The Arbitration and Peace Congress; Title Insurance Department of a Trust Company, Crittenden; Legal Decisions of Interest to Bankers.

NEW ENGLAND MAGAZINE.

APRIL—What's Doing at Washington, Barry; The Rural Degeneracy Cry, Wright; Nineteenth Century Boston Journalism, Clement; The Counsels of Brother James, Allen; Concerning Home and School, Arnold; New Orleans in Transition, Putnam; An Unscheduled Rehearsal, Jackson.

MAY—Old King Spruce, Day; The German Teacher Teaches, Hall; Tobacco-Culture in Connecticut, Logan; A Restoration to Sanity, Holmes; A Singer of Southcreek, Cameron; The Rut, Blanchard; The Fate of the Heretic, Burrows.

THE POPULAR SCIENCE MONTHLY.

MAY—The Jamaica Earthquake, Brown; Sight and Seeing in Ancient Times, Super; The Classification of the Arts, Howerth; The Value of Science, Poincare; Is the Mind in the Body? Fullerton; Drug Abuses and Their Effects on the People, Taylor; Progress of Science.

JUNE—The Problem of Age, Growth and Death, Minot; The Progress of Our Knowledge of the Flora of North America, Underwood; The Value of Science, Poincare; The Acquisition of Language and Its Relation to Thought, Hill; Hygienic Requirements for the Printing of Books and Papers, Huey; Progress of Science.

THE CANADIAN ENTOMOLOGIST.

APRIL—Notes of Some Manitoba Tiger-Beetles, Criddle; Mosquito Notes for 1906, Smith; Notes on Generic Transfers, Cockerell; Geometrid Notes: On the Genus Synelys, Swett; Gall Gnats of Cecidomyiidae, Felt.

THE PEDAGOGICAL SEMINARY.

MARCH—A Study of the Prototypes of the Modern Non-Professional School Among the Greeks and the Romans, Anderson; The Pedagogy of Geography, Gibbs; A Preliminary Critique of the Doctrine of Fundamental Accessory Movements, Shepardson; Is Language a Living Thing? Bascom; The Berlin Congress for Child Study.

THE EDUCATIONAL BI-MONTHLY.

APRIL—The Scientific Spirit, Coulter; Conference on Teaching Science and Nature Study in High and Elementary Schools; Symposium on Nature Study in Relation to Other Subjects; Field Work in Connection With the Geography of Chicago; The Stereopticon in Schools, Cole; The Psychology of Certain Logical Processes, Ashley.

THE ATLANTIC MONTHLY.

APRIL—The Ideal Teacher, Palmer; The New Tariff Era, Bridgeman; The Helpmate, Sinclair; The Spirit of Old West Point, Schaff; The Lesson of the French Revolution, Smith; The Grilling of Sinners, Ross; The Financier, Wheeler; Byron in Our Day, Pyre; Theology and Human Nature, Hodges.

MAY—Railroad Accidents; Dixon; The Helpmate, Sinclair; Confessions of a Spelling Reformer, Lounsbury; The Dawn of American Drama, Corbin; His Majesty the Tree, Davis; Love and the Machine, Pier; The Spirit of Old West Point, Schaff.

THE WORLD OF TO-DAY.

APRIL—Foreign Affairs; The Nation; The Drama; The Religious World; From New York to Boston by Canal, Weir; The Municipal Ownership of Electric Light Plants, Cranath; Harry Pratt Judson, the New President of the University of Chicago, Mathews; Will There Be a New State? Lincoln Weir; Studying the Minds of Animals, Watson; The Making of To-morrow.

MAY—How the Jewish Immigrant Is Cared for at New York City, Isaacs; Japan as a Colonizing Nation, Kawakami; Patriots Who Are Not Soldiers; The New Brazil, Reinsch; Mining the World's Diamonds, Fitz Gerald; The Lighthouse Service of the United States, Claudy; Dividing the River by Treaty, Burleson.

THE CHAUTAUQUAN.

APRIL—Highways and Byways; Reading Journey in English Counties, Lee Bates; Child Labor Legislation in England, Lovejoy; Representative English Paintings, Stevens.

MAY—A Reading Journey in English Counties, Lee Bates; English Men of Fame; Progress of Elementary Education in England, Whitehouse; Arnold Toynbee, Grabo.

AMERICAN JOURNAL OF PHILOLOGY.

JANUARY, FEBRUARY and MARCH—The Unreal Conditional Sentence in Cicero, Nutting; The Prosody of Ille, Radford; Notes on the Schmalz, Krebs; Antibarbarus, Lease; Notes on Philolaus, Heidel; Reports.

HEALTH-CULTURE.

APRIL—Indigestion, Latson; "Open Air Cure" for Consumption, Stanislaus; Proof of Increase in Salt Eating, Colman; Quality and Quantity of Life, Lansing; Eat What You Like, Allen; Health in the School Room, Bacon.

MAY—The Therapeutic Effects of Music, Latson; The Acquiring of Grace, Bond; The English Sanatorium, Bowdish; The Staff of Life, Hurley; The Moral Effects of Athletics, Latson; Medical Testimony About Salt, Coleman; Feeding Habits, Bradford.

SCRIBNER'S MAGAZINE.

APRIL—The Cathedral of St. John the Divine, La Frage; The Smuggler, Connolly; The Fruit of the Tree, Wharton; Silverhorns, Van Dyke; Turquoise and Gold, Hoffman; Winter Gardens, Peterson; The "Open Door" in Manchuria, Millard; Interpretations.

MAY—The Sea Voyage of a Dry-Dock, Aylward; The Call of the West, Lee; The Eyes in the Back of the General's Head, Palmer; The Railway High-Speed Mania, Adams; The Americanization of Roll-Down Joe, Connolly; The Cheese Markets of North Holland, Albrecht.

THE NATIONAL GEOGRAPHIC MAGAZINE.

MARCH—Archaeology in the Air, Scidmore; Railway Routes in Alaska, Brooks; The Maoris of New Zealand; The Great Natural Bridges of Utah, Holmes; A Recent Report From the Doubtful Island Region, Hague; The Possibilities of the Hudson Bay Country; The High Sierra; Motor Sledges in the Antarctic.

APRIL—Millions for Moisture, Blanchard; Women and Children of the East, Scidmore.

LIPPINCOTT'S MAGAZINE.

APRIL—Love's Undertow, Rogers; Ibsen and His Ism, Rogers; Why Rollison Went to Sumatra, Hunt; A Cavalier of Five, Antrim; A Prisoner of the Ground; When the Race Is Run, Oemler; Easter-Time in Rome, Wharton; In Which Yellow Wins, Comfort; Ways of the Hour; Walnuts and Wine.

MAY—The Moyett Mystery, Hopkins; The Mother, Clarke; The Legend of Tannhauser, Knapp; The Real Thing, Roof; The Deputy, Sinclair; Shall We Believe in Ghosts? Bache; The Firebrand, England; The Great Tangle, Belfield; Jimmy Emmence, Matchmaker of Circle N., Cunningham; Ways of the Hour; Walnuts and Wine.

THE ECLECTIC MAGAZINE.

APRIL—The Concrete Soul, Hemstreet; The Channel Tunnel, Knowles; Through the Maylay Jungle, Grew; The Situation in Egypt, Guerville; Northwestern Asia After the War, Ular; The Psychological Investigator, Babcock; Uniformity in Divorce, Richmond; Chile Con Carne.

MAY—John Tyler and His Presidency, Tyler; Canada, England and the United States, Smith; The New Situation in Germany, Blind; The Stewarts in Rome, Vaughn; The Spirit of St. Petersburg, Dalton; The Wreck of the Stella, Howard; In the Market Place.

THE METAPHYSICAL MAGAZINE.

APRIL—The Later Platonist, Wilder; Manifesting Source, Cumming; The Scientific Aspects of Metaphysics, Whipple; The Reality of the Higher Life, Stephenson; The World of Thought.

MAY—Punishment or Reform, Cumming; The Later Platonists, Wilder; Is Beauty Its Own Excuse for Being? Gibson; Self-Control and Health, Whipple; Forces, Evil and Benign, Best; The World of Thought.

AMERICAN CHEMICAL JOURNAL.

APRIL—On the Behavior of Sodium and Sodium Alcoholates Towards Various Eaters of Acetic Acid, Higley; The Osmotic Pressure and the Depression of the Freezing Points of Solutions of Glucose, Morse, Frazer and Lovelace; On Some Semicarbazine Derivatives of Isopropionic Acid, Benzoic Acid and Benzenesulphonic Acid, Acree; The Reaction Between Unsaturated Compounds and Organic Magnesium Compounds, Kohler.

MAY—The Osmotic Pressure of Cane Sugar Solutions in the Vicinity of the Freezing Point of Water, Morse, Frazer and Holland; on Some Cuprammonium Salts, Horn; On the Molecular Condition of Salts Dissolved in a Fused Salt, Levy; On Reversible Metallic Displacements in Aqueous Solutions, Smith.

POPULAR ASTRONOMY.

APRIL—The Number and Distribution of the Stars in the Vicinity of the Pleiades, Wilson; The Solar Apex, Ryan; The New Development of the Kineatic Theory of Gases, d'Auria; The Study of Variable Stars, Barr; Halley's Comet, Henkel; Planet Notes; Comet Notes; Variable Stars.

MAY—How to Obtain the Position of a Star from a Photograph, Perrine; The Place of Origin of the Moon; The Volcanic Problem, Pickering; Standard Stellar Magnitudes, Pickering; Planet Notes; Comet Notes; Variable Stars; General Notes.

THE AMERICAN BOTANIST.

MARCH—The Common Bracken as Food, Dalgity; Spring in Stony Par Wheeler; Some Inconspicuous Flowers, Clute; Ailanthus, Bailey; Early Blo soms, Dobbin; The Pastachio Nut; Note and Comment; Editorial.

APRIL—Solomon's Seal, Bailey; Some Wood-Destroying Fungi, Hausma Some Spring Flowers, Clute; Sage Brush and Cactus, Johnston; Books a Writers.

MODERN LANGUAGE NOTES.

APRIL—Browning's Dramas II., Sparror; An Early English Translation George M. Baker, Sampson; Studies in Middle French, Gay; German, Meade A Glance at Wordsworth's Reading, Cooper; Some Disputed Etymologies, Woo Reviews.

MAY—All of the Five Fictitious Italian Editions of Writings of Machiave and Three of Those of Pietro Aretino Printed by John Wolfe of London, Gerber; The Authorship of Two Seventeenth Century Plays, Adams; The Coun of Remiremont, Warren; Milton's "Sphere of Fortune," Osgood; Etymologi Francaises, Mosemiller; Scott's Ivanhoe and Sydney's Arcadia, Kerlin; Vario Notes, Cook; Notes on Calderon, Buchanan; Miscellaneous Notes, Pearce; Notes A. Daudet's Stories, Jenkins; Reviews.

SOUTHERN HISTORY ASSOCIATION.

JANUARY—Canning and Cuba; Doolittle Correspondence; Heroes of Americ Hamilton; Race Problem Discussion, Stone; McHenry Papers; Reviews; Not and News.

POPULAR SCIENCE MONTHLY.

APRIL—Pioneers of Science in America; Notes on Development of Telepho Service, DeLand; The General Economic Importance of Mosquitoes, Smith; H Shall the Destructive Tendencies of Modern Life Be Met and Overcome, Newto The Value of Science, Poincare; A Defense of Pragmatism, James; Civolog Keasbey; The Reclamation of the North Platte Valley, Coulter; Shorter Article The Progress of Science.

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LELAND STANFORD JUNIOR UNIVERSITY

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Industrial Education in a Prairie State, Chancellor E. Benjamin Andrews, University of Nebraska; An Alabama Interpretation of the Work at Tuskegee, President John W. Abercrombie, University of Alabama; Education in a Democracy, Hon. Joseph W. Folk, Governor of Missouri; The New Commissioner of Education, Professor Walter Miller, Tulane University; The Functions and Relations of State Universities, President D. B. Purinton, University of West Virginia; The Achievement of a Generation, President E. A. Alderman, University of Virginia; The Ideals of a University, President L. Hulley, Stetson University, Florida; What Should Be Done by the Colleges and Universities for the Religious Training of Students, Professor Edwin Mims, Trinity College, N. C.; Social Life in College, Professor St. George L. Sioussat, University of the South, Tennessee; The Place of the Agricultural and Mechanical College in the Educational Scheme of the South, President Brown Ayres, University of Tennessee.

School Supervision.

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Secondary Education.

In What Definite Ways May the State Department of Education Further the Establishment of a System of Public High Schools, Hon. Elmer Ellsworth Brown, U. S. Commissioner of Education; The Relation of the University to the High Schools, President D. F. Houston, University of Texas; The Relation of the Higher Institutions to the Secondary Schools, Professor Joseph S. Stewart, University of Georgia; Shall Agriculture Be Taught in the Secondary Schools of the United States, Dr. S. A. Knapp, U. S. Bureau of Plant Industry, Louisiana; Agricultural Education in Secondary Schools, Professor W. Lochead, MacDonald College, Canada; Agriculture in High Schools, Dr. Dick J. Crosby, U. S. Department of Agriculture; School Boys and an Intellectual Life, President Brown Ayres, University of Tennessee; The Preparation of Students for College, Dean Frederick W. Moore, Vanderbilt University; Entrance Examinations in English, Professor Richard Jones, Vanderbilt University, Tennessee; Aims and Methods of Teaching Civics in Elementary and Secondary Schools, Professor Isidore Loeb, University of Missouri; German and French in Secondary Schools, Professor C. C. Ferrell, University of Mississippi.

SOUTHERN EDUCATIONAL REVIEW

October-November 1907

Self-Government by Students in School and College.

By PRESIDENT W. O. THOMPSON, Ohio State University.

The subject selected for this evening, upon one phase of which I have been requested to offer a few remarks, grows in interest as society begins to recognize the school as an ever increasing social force. Just as modern democracy has widened its horizon and the developmental functions of the government have been receiving increasing attention, so the school has steadily taken on importance. Whether we like it or not, the school has assumed a very large place in the development of youth hitherto believed to belong to the family and the Church. We may debate to our heart's content the relative place to be occupied by these three great institutions, but in the practical development of society the school occupies a steadily increasing area. The public standards of education and the tendency toward compulsory education everywhere in the country, together with the growth of public sentiment in favor of free text books as part of the equipment of the school, all unite to make the school-room a training school for citizenship. It is not without reason, therefore, that people are insisting that the school shall be held more and more responsible for the quality of our citizenship. In the presence of this increasing responsibility the problem as to the best methods of training in citizenship is not easy of solution. Self-government in schools and colleges has been looked upon by many as important, because it looks to this end.

As a matter of history we recognize that there has been a steady development in the care and discipline of our schools. Corporal punishment has practically ceased everywhere. The old ideas of government in the public school and the college were largely monarchal. This was probably due to the fact that the teacher was

regarded as standing *in loco parentis.* The early idea of the parent was that he was a person whose authority should not be questioned and need never be explained. The parent of earlier days did not feel called upon to discuss the rightfulness of his authority. He was disposed rather to insist that it be recognized. Accordingly, teachers revealed the spirit of the age only slightly modified. The responsibility for the pupil or the student at college was placed upon the teacher by the public, and more or less willingly accepted by the teacher. The private school always made mention of this nurture and care as an attractive feature in soliciting students. Doubtless there have been times when colleges resorted to student government because they knew not what else to do. Certain evils existed which neither president nor faculty could correct. They sought to shift the responsibility from the teacher to the student, as the parent oftentimes had shifted it from himself to the teacher. Recent years have witnessed a tendency to shift the responsibility for student disorders to the State, by insisting that such matters should be under the direct supervision and control of the police power of the State. This effort emphasizes the fact that students are citizens always and students temporarily; that student life does not in any way release from the obligations of citizenship. It assumes further that students in colleges are of sufficiently mature age to be treated as citizens rather than as candidates in training for citizenship. In accordance with the usual tendency toward imitation, public high schools are emphasizing the same features and relying upon the police power of the State to protect the institution from disorderly conduct. In the lower grades relief has been sought through the reform school or other especially arranged centers through which delinquent and defective students are segregated.

This shifting of responsibility, or, as some would prefer to say, this new conception of where responsibility really lies, has given rise to the theory that all children and students should be brought to assume responsibility for themselves, should be encouraged in self-control, and be directed as little as possible. In other words, there is a decided tendency to push responsibility further down. (Inevitable when you release autocracy.) It has long been the cherished theory that where government is best needed, man is most free. If by any means, therefore, we can initiate the principle of self-government early in life, we may hope to reap larger fruits from it in the mature years.

It may avoid confusion in our minds if we keep close to the

meaning of our terms. Government is associated with some degree of external force. The State is sovereign only when it can enforce its decrees. Government is effective only when it can do the thing it starts out to do. We think of it in this country as having three different functions—legislative, executive and judicial. In the legislative function the State expresses its will, in the judicial interprets it, and in the executive enforces it. Weakness at any one of these three points is fatal to sovereignty. The sovereignty of democracy lies in the people. Any form of government, therefore, that does not carry with itself the sovereignty of the people is a shadow in fact, whatever it may be in form. The highest expression of sovereignty is the ballot. The age at which the citizen may exercise this duty may be more or less arbitrary. Nevertheless it expresses the common agreement that citizenship is the highest honor and the distinct badge of sovereignty in a democracy. So important is this truth that no organization among men may ever have an obligation contradicting the obligations of citizenship without being subject to the charge of disloyalty and possibly of treason. All organizations of men must, therefore, recognize the superior authority of the law of the land. To obey that law is the highest duty of the citizen and to enforce it is the chief duty of the officer. From this point of view no organization of children or minors can assume the place of the State; nor can it exercise the functions of sovereignty. It appears equally clear that no organization of children may assume the duties or obligations of parenthood or of the church. The limitations of student government manifest themselves at once. It is noticeable that in all the efforts that have been made in this direction, the teacher, the school, the board of education, have not vacated authority, but have as a concession granted the privilege of government and control under approved principles as expressed in the constitution and legislation thereunder. In the George Junior Republic, for example, there is a final authority outside of these Junior citizens, so that there is always present the question as to the limit of power and the extent to which such a republic could coerce one of its citizens. It would seem, therefore, that in all such efforts, praiseworthy as they are, and beneficial as many of the results doubtless are, the process is really one of experiment for the purpose of education. It has brought more emphasis to the pupil or student upon the importance of self-control, co-operation with others, and of obedience to properly constituted authority. In most, if not all such cases, the pupil or student has agreed to the constituted

authority and promised obedience. Now these lessons and these experiences are most fundamental in training good citizens. It is not necessary that these organizations shall have the attributes of sovereignty in order to train men and women to become effective units in a sovereign democracy. It is important, however, that in the organization of such efforts pupils and students should clearly recognize the limitations of the experiment. I should say that such experiments are related to the theoretical instruction in citizenship much as the laboratory is related to the lecture, and that the exercise of the duties of citizenship in such a Junior Republic or in a public school was related to actual citizenship much as the laboratory is related to the ordinary business of life.

This training in initiative and self-direction and self-control, is important as illustrating the natural road toward leadership. It will always remain true that he who would command successfully must first learn obedience. The supremacy of law is the most fundamental principle in democracy. There can be no ideal citizenship until the law as expressed by the people, has been re-enacted into the consciousness of every citizen with hearty approval. The element of force used by the officer is called forth always by the spirit of disobedience in those to whom the law is merely external. When a pupil or student by his own assent writes into his own consciousness the approval of the law of the school, and has re-enacted it as the rule of his own life, he has taken the most important step in his training for citizenship.

I presume it will be agreed that the most important element in this experience of student government is the development of the initiative. Of course we mean initiative toward the good, since no school experience is ever assumed to develop or educate the child away from the ideally good. Just here emerges a practical question. We recognize that not every pupil or student develops initiative power with equal facility, nor do they all incline toward the good as we might wish. The distinction between the teacher and the pupil is here clearly drawn. The maturity of the teacher, together with his education, is presumed to prepare him to assist others in self-realization. This is impossible until the teacher has developed in himself the power of initiative. Teaching, therefore, at the beginning should aim to direct the pupil and lead him to expression. Here we see the application of that universal law to which Drummond called our attention in another connection years ago—that all help is from above. By some means the teacher must get into the estate of the student and together they journey

the upward road. This touch of teacher and pupil is the moment for which all other moments wait. This is the supreme moment in teaching in which the soul is born anew. It is doubtful, therefore, whether any self-development has ever been achieved except through association with others. This association should be carefully selected, as oftentimes nothing is more destructive of initiative than association with the unsympathetic and inconsiderate. The grading of our schools, even the grading of pupils of the same age in accordance with capacity, previous training and present achievement, recognizes the importance of this principle. The waste of time so often complained of in education is frequently due to an association that fails to take the individual into sufficient consideration. It is not so much that time is wasted as that a teacher is wanting at the moment of opportunity. For this reason there is always danger ahead when any boy or girl is left to the control or direction of his own associates. The inspiring leadership of the teacher is always needed to counteract all possible deficiencies of immature association. From this point of view the legislative authority of pupils and students is a doubtful good. Whether it is ever wise to subject one student to the initiative of another may be seriously doubted. It is to be observed that in all student government the teacher or the authority represented in him is always present. The power exercised is never the sovereignty of citizenship; it is a delegated concession. Legislation can never be approved except when the law expresses the truth. If, therefore, student legislation is to express the truth and to declare the standards of life among students, it needs the supervising intelligence of those who are in authority. The ethical problem involved is somewhat perplexing. Whether teachers and communities may encourage the youth of our land to play at the most serious business that engages citizenship, may be doubted by many people for the reason that such experiences are apt to lower the ideals of government rather than to exalt them.

We pass to the third general consideration—whether school experience should be so related to the actual transactions of life that one may be properly regarded as the extension of the other, or whether the school should give itself chiefly to theoretical problems, leaving the student innocent of the dangerous realities of subsequent life. This consideration is seen at once to be an ethical question involving the general purpose of school experience. As a practical question it involves the wisdom of different methods. The earlier custom was to regard the school in a large degree separate from

life. This was not in the sense that good principles should not be taught, but rather that the school was more or less a place of seclusion in which chief attention was given to discipline, training and culture. It was perfectly natural that under such conditions there should grow up the separation indicated by the expression "the town and the gown." When such separation and seclusion was in practice, naturally enough students came to regard themselves as under a different law from the citizen. The wild oats theory of life was apt to have its full fruitage in the college boy, and its beginnings in the country school. Children and youth were not regarded as under precisely the same law as their elders. Recent theory has tried to emphasize the fact that we are never out of the State, and that we are never free from the obligations of citizenship or beyond the reach of the law. This tendency to hold all ages to the responsibility for conduct, has influenced our theories of school management. We have sometimes taught our pupils that they are in a little world of their own, subject to the same laws as a business man on the avenues of commerce. Our success in this has not been entirely satisfactory. At all events, school children and college graduates have required some time to adjust to the new conditions, and so uncertain has the public mind been on the results reached in the schools that there is always a nervous anxiety about the moral peril associated with the transfer from school to practical life. The aim of the school in general is to reduce this peril by a complete preparation for life. Student government is an effort upon one phase of this problem. The essentials of citizenship never vary. The application of these principles must be made to meet the changing demands of place and position. The more concretely we can teach these truths, the better, we are told. The modern methods in education insist upon these principles. In the college the laboratory is the chief means. Our students in sociology use the unfortunate and unusual classes as a laboratory of instruction; our students in technical education use the great power plants; and just now the students of agriculture all over the country are in Chicago where tomorrow they will engage in the prize contest in stock judging. During the next week a great international stock show will be used as a large laboratory in which hundreds of students of agriculture will be instructed by their teachers in the best breeds of live stock of all kinds. This is done in order that the school-room experience of the student in agriculture shall fit in with his subsequent experience in stock raising and farming. The engineering student visits Niagara, Buffalo and other points of

interest in order that he may correlate his college laboratory with his practical experience later on. It will be noticed that it is not possible to make such accurate comparisons in all lines of study. Nevertheless, experimental methods are here, and teachers are trying to make school life a part of one's real life. This is not to undervalue the theory, but rather to put life into it and arouse a keener interest in the student. In the illustration I have used, the student may see these things. He may readily appreciate that what he is doing in school will fit him for the larger experience of the future. Our mistake has been, or perhaps I should say our misfortune, that we have not been able to show the average boy that mastering the Greek verb or Latin declension was as really preparing for later experiences as the engineer's laboratory or the agricultural student's stock judging room. The division between the older and newer education is chiefly at this point. The teacher and the school have failed to make a connection between the abstract of the schoolroom and the concrete of life. This failure accounts for the indifference and uninterested method of the pupil.

Now the problem of self-government, so called, in the school, is interesting because it opens up the possibility of arousing an interest in civic affairs earlier in life, and plants deeply in the consciousness of the small pupil the most fundamental ideas of patriotism. This in itself would be sufficient justification for the considerable effort on the part of the school. The intellectual awakening that comes to the boy inspired with a sense of duty and responsibility is always worth while. There is no serious danger that such an awakening will detract from the other engagements of the schoolroom. On the other hand, I believe that they will be invested with a new interest. To arouse the spirit of a boy or young man and give it opportunity to express itself in a legitimate way cannot fail to be of benefit in collateral work.

Our teachers of psychology tell us that it is unfortunate for any person under the influence of a stimulus to have a good impulse awakened repeatedly without opportunity of adequate expression by the actual doing of the good thing suggested. The collection in a church serves an ethical as well as a financial end. Every good impulse awakened should have a proper and adequate expression. This suggests the weakness of mere abstract teaching of ethics, patriotism or citizenship. If a boy is to have himself stirred to a high state of emotion and give no expression to the impulse, the emotion will become his weakness later on or, what is just as unfortunate, the stimulus will fail to produce any result. The govern-

mental organization suggested among students, does furnish opportunity for the expression of impulses toward justice, righteousness, obedience and other cardinal virtues in citizenship. Moreover, it is natural to expect that in the everyday association of the boy with his playmates, his family and the strangers he may meet, these same impulses will find simple and correct expression. At once, therefore, the school relates itself in a sympathetic way with the practical experiences of everyday living and the boy discovers that he is in the world at the same hour that he is in the school.

It is proper to remark in reviewing the experiences in these school experiments that there are two sides to the question from a practical point of view. One is tempted to ask whether there is not danger of underestimating criminality or the crime of law breaking in view of the light penalties that must be visited by pupils and students upon each other. It is most unfortunate when people come to regard law-breaking as a matter of little importance. There is a serious state of moral decay when the conscience of a community is not aroused in the presence of wrong doing. The treatment to be given by the State or by the school to disobedience, law breaking or violation of principle, is a most serious matter. Manifestly the school is limited in this regard. To be sure, most offenses are unimportant. The fact, however, that by agreement and voluntary association certain groups of students have agreed to govern themselves by elective officers operating under written agreements embodying constitution and statutes, is apt to give them the impression that they may interpret not only the law, but the penalty for the offense. At this point it is most important that the education of the conscience shall see that there is no tendency to moral blindness. If our youth, either in school or college, are to be trained into indifference, or are to fail to distinguish between right or wrong, or to have their ethical perception dulled, then the experience is not merely unfortunate; it is disastrous. On the other hand, it may be quickly asserted that the teacher and the school will correct such tendencies as have been referred to. That, of course, is possible from the standpoint of theory. Whether it will be done will depend almost entirely upon the spirit of the school-room and the energy of the teacher. I incline strongly to the belief that the teacher will prove a valuable corrective, and I am clearly of the opinion that all efforts toward such government in school or college should be clearly set forth as a privilege and concession for educational purposes.

So far in this paper the discussion has been of such a character

that the principles announced apply chiefly to the school rather than the college. I desire, therefore, to make a distinction in our minds between what is appropriate in our public schools and what would be appropriate in our colleges. The public schools are training and educating large numbers who never pass through even the high school, and a very small percentage ever reach the college. For this reason, certain methods are applicable and justifiable in public schools that do not fit so closely into the conditions of college life. The confinement of the public schools to a single room or at most a building for the entire day, offers an opportunity not found in this day in the ordinary college. Moreover, there is a joint guardianship between the parent and the school over the time, the occupation and the habits of school children. When removed from one jurisdiction they are immediately under the other. The end of self-government in the public school is to secure self-control, obedience to rightful authority, a patriotic view of government, and a familiarity with the processes of government, so as to illustrate and impress upon the mind the teachings of civics as set forth in the elementary schools. Much of the machinery used in the public schools has been very effective in reaching these results. Even when college students come from schools where these methods have not been used it does not follow that they are in need of the same methods.

The educational features of such institutions as the George Junior Republic, the John Crerar School of Chicago and elsewhere, have much in common that is commendable. It is noticeable also that in certain places the reformatory idea is manifest, as would not be appropriate in the public schools, since these are institutions of education and not professedly schools of reform. In the reform efforts it is manifest that the assuming of any degree of responsibility sobers the mind of the boy, just as the ownership of property makes the mature mind more conservative. I mention these facts simply to make clear my approval of the methods and prepare the way for a modification of them in college government.

The history of college discipline is a very instructive chapter. From the strictest sort of paternalism and autocracy we have gone to the extreme of democracy as represented probably in the University of Virginia. The dawn of conscious power in the student at college is quite different from any experience of the boy in the public school. Moreover, the progress of the country in education has made such a change in the maturity of the college student that new methods seemed imperative.

From the older methods the college world turned to the method of student government. This was the other extreme, and like all extremes, attracted many people, but was regarded with some doubt by the conservative. At the University of Illinois about 1869—then the Illinois Industrial University—an experiment on a large and elaborate scale was attempted. This really was a miniature republic with officers duly elected and charged with duties to which the students had assented under student legislation. That experiment was abandoned after a trial. A crisis came which tested authority which proved fatal to the whole plan. A full account of this interesting experiment may be found in the proceedings of the National Educational Association in an address by President Selim H. Peabody (see National Educational Association proceedings, 1889, page 539). Another notable experiment was with President Seeley at Amherst. Here a strong, forceful and pleasing personality won the students to him and his methods. For a time student government flourished, but here as so often in political affairs, the death of the ruler left a dismembered government. At Amherst there has been no successor to President Seeley in this particular. When we examine into the causes of the decline of student government we discover that it grants authority, but can not fix and locate responsibility. At any moment a student may withdraw from college and leave nothing behind but a record of suspension or dismissal. This in no way compensates for the lease of authority. The college can not run away; it must remain as the residuary legatee of all the mistakes or blunders of the departed authority. Moreover, the force of law lies in its penalties. A student court or legislature will neither decide nor legislate against students in a disinterested way. Faculties even will not criticise each other. They are very slow to discipline their fellow members. What then can we expect of students whose personal attachments are often closer and more biased.

In addition to these considerations the State, through its courts, will not recognize the legal standing of a body of students. The responsibility for property, for the use of funds, and for the general welfare of the college is vested in trustees and faculties. Student authority is therefore, at best, delegated authority, with a strong reason to doubt whether the constituted authorities have any right to delegate to students. The whole situation lacks genuineness. The student is a temporary resident for a specific purpose, which is not government, but instruction. He is there voluntarily, with no definite or assured tenure of position. It seems irrational, therefore,

that he should take into his hands the temporary administration of policies and interests of which he is neither the creator, the supporter nor the guardian, but wholly the beneficiary.

This is not to say that a student or a body of students should not be consulted; it may be the highest wisdom to advise with such bodies. It is important that all available facts be known; that there be a clear understanding of all conditions and problems; but I object to the policy of fooling or trying to fool a student by leading him to think he is governing the college, where, as a matter of fact, the college is governing him if it is doing its duty and administering its trust. The method really sought in the modern college is to have the student control himself, rather than to attempt to govern other students. There is a distinction here that is important. The college officers have to dó with the institution as such, and the modern tendency is to put upon each student the burden and responsibility of his own conduct, both as a citizen and as a student. This is in fact the very change sought by the methods of self-government in the public schools. The same principles are here involved, but they are administered in harmony with the new environment of the college. The real problem in college discipline has been to bring the student to see that it was not his business to govern the faculty or the institution, but rather to govern himself and assume the responsibility of his own position as a student.

The prevailing method may be described as administrative government. This is the method steadily coming into use in all our colleges. Under this conception there are some things to be assumed, among them (1) that the college is a public opportunity, (2) that the property is a public trust, and (3) that the faculty is an organized agency for co-operation and leadership and the student a responsible party whose privileges are to be measured by his willingness and ability to make profitable use of the opportunities.

These conceptions banish at once from the minds of all the old notion of antagonism between student and professor, and put the college life on a natural and rational basis. The faculty is therefore naturally and properly the legislative body, and the president and other officers—such as deans in our larger schools—are the administrative officers. The whole government becomes one of principle. The modern college steadily approaches the spirit of democracy, where all students stand on a level or equal rights, with no favors. As soon as students come to understand this situation the sobering effect of responsibility is manifest. There can be no trifling with principle; hence the offenses against good government are serious.

This view holds out that a student is not in college as an accommodation to the faculty or to the public; the faculty and the institution are there for his accommodation if he will use it properly. Colleges are steadily going out of the nursing business. Students must go elsewhere for their health or the indulgence of their whims. The college is for business, and a very serious and important business at that. The details of a student's life are important to the college chiefly because they help or hinder the great cause for which the college stands. I believe we have often weakened the cause of education by leaving the impression that discipline is an important issue. The truth is, it is only an incident. If the student can not understand this, he should be given to see that his preparation for college life is yet incomplete, and that he ought to go elsewhere and complete his preparation. I believe thoroughly in a large and liberal spirit which locates responsibility, and in a system of government that has the courage and firmness to promptly say to students that their privileges as students cease when they fail to be good citizens.

The best test of a student's right to be in college is his satisfactory performance of the student's duty. The academic requirements should be insisted upon firmly and even rigidly. Insist upon it that education—the requirements of the curriculum—shall be promptly and regularly met. This attitude neither accepts nor makes apologies. The average student will soon see the force of this law and the justice of it. If he is not fit for such a school he will soon drift to his proper circle; but he will do it with increasing respect for the institution of which he was not worthy. That in itself is a valuable result to secure.

I believe, therefore, that the whole question of college citizenship should be defined by a few fundamental and important principles. These should be public. The student should be face to face with the law of the college, just as the citizen is face to face with the law of his land. These laws are made by properly constituted authorities and administered by properly constituted officers. In State institutions the force and power of the State is behind college administration. This fact should be clearly and persistently set forth. In a State institution the supremacy of the law of the land and the necessity of good citizenship should be as clear as the day. College authorities should turn over to the State authorities every offender. It may appear rigid and cold in the first instance or two, but there will be a long interval between troubles. In my own experience I have not hesitated to declare that the law of the State

should be enforced and that I should regard any destruction of property or interference with the rights of citizens or students as proof of a kind of citizenship that could not be endured in a college. I believe that American students respect an administration that respects itself and respects the law of the land. In a college, as elsewhere, the cure for disorder is a high order of citizenship. Let the high ideals of a genuine democracy inspire the colleges and we shall hear less of hazing, of dishonorable college traditions, but more of scholarship, of college fellowship, and of social service.

In conclusion let me say, therefore, that while there is a difference of administration between the public school and the college, there is a growing unity in that responsibility for personal conduct is being located upon the individual, while both school and college are looked upon as organized opportunity in which teachers and officers by their inspiring presence lead others toward the realization of the highest ideals of democratic citizenship. In realizing these ideals the school of every grade is less apart from the world than ever before, and there is more fellowship between all interests concerned than ever before. The school recognizes itself as one of the agencies of society, while society recognizes itself as legitimate fruit of these agencies. The larger place that education will occupy and the importance of the results reached in our schools, alike justify our attention and the consideration of such a congress as this.

The Duty of Normal Schools to Provide Library Training.

By W. I. Fletcher, Amherst College, Mass.

I find myself under some embarrassments in appearing before you to-day. The name given to my subject in the program is not quite to my liking, as I am not here for the purpose of teaching normal schools their duty, in any sense of fault-finding with what they have done or are doing. I would rather have called the subject the need of some library training in normal schools. If this need really exists and is brought home to the authorities of the schools there is no doubt that they will see their duty and do it.

Another, and a more serious embarrassment, is in the fact that since I accepted this appointment there has appeared the report of the Special Committee of the National Educational Association on this very topic, a most complete and admirable report, as might be

expected of this Committee, with Dr. James Canfield at its head. I have to confess that I was not aware that this report was impending, and now that it has come out, I feel like excusing myself in the language of the "double" in Dr. Hale's story, "So much has been said, and, on the whole, so well said, that I will not occupy more time."

But this report is so full and complete, and goes into the subject with so much of practical detail, that there may yet appear to be room for a brief statement along the same general lines, endeavoring to bring out and enforce the main principles underlying the movement for a further unification of the libraries and the schools. And it has seemed to me that nothing could be better than to view the subject somewhat historically and if possible recognize its evolutionary aspects and so judge its future by the past with its foreshadowings of things which now seem ripe for consummation.

Thirty-five years ago I was for four years in charge successively of two very popular free libraries in the manufacturing towns of Waterbury, Conn., and Lawrence, Mass. I do not remember that during that time anything was ever said of any special relations between the public library and the schools. In fact, a paper prepared by me in 1874 on public libraries in manufacturing communities, contained no allusion whatever to the schools.

No doubt efforts were already made sporadically to utilize the public libraries in school work. I believe such efforts in Boston and Worcester, certainly in Quincy, Mass., antedated the period of which I am speaking. But it is significant of the slight extent to which this movement had then progressed that the encyclopedic report on public libraries in the United States, issued by the U. S. Bureau of Education in 1876, containing in its 1200 pages, 39 chapters by many writers on all phases of library work and history (my own paper just referred to being among them), had no chapter relating to the schools. In another chapter which I had the honor of contributing, on "Public libraries and the young," a few lines are devoted to the "one or two ways in which the school may work together with the library in directing the reading of the young." I believe such a co-operation is nowhere else suggested in the volume.

With the establishment in 1876 of the American Library Association, nothing seems to have more quickly attracted attention as a theme of discussion among librarians, or an end to be sought by co-operative work, than this idea of drawing together the library and the school. The first volume of the Library Journal, the organ

of the Association, contained in its number for August, 1877, a report of an address by Charles Francis Adams on the use which might be made of the public library in the schools, especially the high and upper-grade grammar schools. This address marked the beginning of a new era for school work. The idea to which he gave probably the earliest and most cogent expression, has constantly gained adherents, until now there are few places where the library and the school co-exist without being in more or less affective co-operation.

I say "more or less;" aye, there's the rub! the "less" is so much more in evidence than the more! May I take a few moments to sketch rapidly what seems to me a practicable and efficient co-operation of these two agencies, and then I am sure the moral will be obvious, that the Normal school has something to do to make such results common.

Modern education is not so much a matter of three R's as of three H's. It aims to train Head, Hand and Heart. Time was when only the head was much thought of in our common schools. The storing of the mind with knowledge was regarded as the one object, with perhaps some incidental reference to the disciplining of the powers, and the teacher's province was too largely that of assigning lessons, hearing them recited, and maintaining order. Within the memory of many of us, a great change has come over our educational system. The advent of science studies and of manual training—too often thought of as so much addition to the school curriculum—marked the incoming of a new spirit and method. The packing away of knowledge in the mind like so much dead material gives way to the better process of developing the powers not only of intellect, but of hand and eye and other organs and capacities. The school trains the pupil not simply to know, but to do. Manual training means not showing the pupil how to do certain mechanical work, but infusing into him the spirit of work, awakening the creative instinct, teaching thoroughness and care and skilfulness in the handling of materials. To the boy or girl life is lived largely in the physical. It is too soon to lay heavy burdens on the merely mental powers, which are but beginning to find themselves. It now seems strange that we waited so long before giving a place in our school work to this training of the physical as the basis of the mental and the aesthetic.

So much for the head and the hand. What are we doing for the heart? Perhaps this is a more significant question than we think. We certainly should agree that the secularizing of educa-

tion cannot be carried so far as to exclude the heart from its benefits without dehumanizing it. The fallacy is very current that the state, which is the source of our education, cannot undertake to teach morals or religion, and that therefore our education cannot aim to reach the heart. Doubtless it is difficult to provide ways in which the state-supported schools can teach ethics unless ethics can be made absolutely formal and divorced wholly from religion. But not by such ethics or by any formal teaching of morals can the youthful heart be reached. Wiser counsels are already prevailing. Our schools are beginning to be places in which refinement and good taste make their powerful appeal to the young soul. Works of art decorate their walls and speak to the responsive nature of children in a language to which it answers sympathetically, though to some extent unconsciously, flowers in the school windows, flower beds and a lawn in front of the school house make their gracious flying over the building calls out patriotic and heroic feeling. Music and drawing are taught and often so taught that latent powers both of appreciation and of expression are aroused and set to work. "Discipline" in the school-room is to some extent being supplanted by instinctive good behavior, resting on mutual good-will and affection between teacher and scholar. The wise philosophy of Froebel which finds expression in the cheer and happiness of the Kindergarten has quite largely invaded the lower grades of our public schools and lays its potent hand of calm on the turbulence and rudeness that were characteristic of the common schools of the last generation and still mark too many of those of to-day.

It is along the lines of development and uplift which I have indicated that the public library comes in to aid the school. To begin with the ordinary routine teaching of the school, it is being found effective beyond any other instrument, in delivering that work from text-book routine and irksomeness.

It enables the teacher to substitute for the reading book, a succession of readings from wisely selected books representing the best writers of all ages; something of this sort has come in very largely through the supplementary reading now furnished so generally to the schools. But a judicious use of the public library enables the teacher to go much further afield and to make the reading lessons to some extent an introduction to a course in literature.

Grammar or "language" lessons, by the same method, are broadened out into something like a sympathetic study of style, and rhetoric reduced, of course, to the lowest terms for the youngest

children, but with skilful handling made vital and interesting even to them.

Geography, which was the bane of my own school days, is also vitalized and humanized. I visited a room in the ninth grade in Amherst the other day, and found an illustration of this. The class was studying Africa, and on the teacher's desk were about a dozen books on Africa drawn by the teacher from the town library. These were attractive books, for the most part illustrated, but among them I noted Prof. Henry Drummond's Tropical Africa, usually regarded as a grown people's book. The pupils had been reading in these books, taking them to their seats as they had spare time, and to their homes when they wished. To them Africa had become a real living country, and Stanley, Livingstone and Kitchener were so associated with it that the youthful ardor of hero-worship, so easily kindled, had attached itself to the land and given to rivers and mountains and deserts a charm which no school geography could quite compass.

When it comes to arithmetic, the use of the library books is not so obvious. Nor do I happen to have heard of any special way in which the public library has been found effectively helpful in teaching mathematics. Still it is not difficult to suggest that fresh interest could be aroused in Colburn's Mental Arithmetic (if that is the text-book used) by readings from the life of Zerah Colburn and stories of other prodigies of mathematical genius. As the different arithmetical processes are considered, interesting bits of astronomy, physics and even history will be found associated with them, and the teacher who is willing to give a little time out of school to the search for books thus suggested will be richly rewarded by acquiring a good deal of knowledge new to herself and perhaps an enthusiasm in regard to mathematics that she never dreamed could be hers, and which will be imparted to her class in spite of her, and greatly to the advantage of both teacher and class.

It goes without saying that a fairly good town library with some scores of the best and most attractive books on birds, flowers, ferns, astronomy, geology and natural history will be a powerful help and incentive in all science studies. In fact, no science study can be better for the grades below the high school than the reading, under the teacher's guidance, of books from the library. The reading is best conducted, if divided between selected portions read by the teacher to the school and other portions read by the pupils in school or at home. All these books should be available for taking home when the pupils desire. It is a mistake to lay out a course and

require all or any pupils to follow it. It is the first principle of advantageous reading, especially in books of this class, that pleasure should be taken in the reading, and it is generally not difficult to find some avenue of approach to ease your mind; with one, it will be love for flowers, with another a passion for pets, with another an interest in the stars or in different kinds of stones or in fishing and hunting. A variety of books selected with reference to all these known or guessed at predilections should be in the school room when the time comes for a few weeks of science, and the teacher's task in guiding the young readers need not be a difficult one.

If the library may be thus useful in connection with the head work of the school, it may certainly bring its aid to the manual training as well. Most boys are rather fond of books on mechanics and on machinery and on inventions. When I was a boy, such a thing as manual training was not dreamed of in school. But when I remember how I enjoyed reading the life of George Stephenson, how like a romance seemed the tale of his first locomotive, "The Rocket," I can well believe that it would have been a powerful incentive to me in any intelligent hand-work to which I might be put. So with books on the history of the steam-engine, on electric motors, on flying machines, and lives of the great engineers, bridge-builders and mechanicians. The romance of watch-making, the story of the great clock of Strasburg, or of the famous 999 engine on the New York Central, what could be more fascinating to the mind of the average boy or what could sooner impart zest to the work of the manual training department. And for the girls books are not lacking. Those on needle work and laces, on costumes, on domestic customs are numerous and attractive; and there are lives of Florence Nightingale, of Miss Willard, of Mary Lyon, and of many other women "who did" some good, true work of skill or of trained workmanship.

All this is so simple and obvious that it almost goes without saying when the underlying principle is stated. And if the schools in our towns, if your schools, my teacher friends, are not working in these ways and getting this aid from the public libraries, it is largely on account of your lack of training for such work.

But I must take a few minutes to speak of the library as aiding the school in its approach more or less distinct, and more or less recognized as a legitimate part of its work, to the heart of the pupil. Lest I should be misunderstood, let me make a little plainer than I have what I mean by the heart as distinguished from the

head. In a word, I mean the power of being, as distinguished from the power of knowing or the power of doing. As I have before intimated, it is evident that by the very genius of education as revealed and expounded by such men as Froebel and Thomas Arnold and Horace Mann and Henry Barnard we are irresistibly led always to seek something higher and deeper than the art of knowing or the art of doing. Somewhat blindly we feel around for ways of getting at the springs of being in our pupils. No true teacher is content to be in a relation with pupils other than that of mutual love and confidence. Nor can such a teacher rest satisfied while low or mean or vicious traits of character manifest themselves in the school. A flagrant moral break-down in a pupil in school or after graduation, discounts and renders nugatory whatever may seem to have been accomplished in the intellectual training. The teacher whose character is not above suspicion, is not tolerated. Intellectuality, smartness, may pose for a brief while at the teacher's desk, but without character, without that zeal for the formation of character which is a *sine qua non* in an educator of youth, no teacher can long hold his place with honor and respect. What I am trying to enforce is that we do allow a large place in all our thought of a school for the moral element. I pass rather lightly over the aesthetic because I prefer to consider that as included in the moral. Since hearing a good orthodox theological professor say in a sermon, "Good taste *is* religion," I do not trouble myself to find a place for the aesthetic outside the moral. So I place the work of art in the school room, the flower in the window, the flag overhead, the Bible on the teacher's desk, the heart within the teacher, in the one category of things whose mission is to the heart of the pupil.

With this exposition of my meaning in speaking of education as aiming at the heart, you will be prepared, I am sure, for me to say that this department of school work is the one in which the public library may prove itself, has proved itself in many places, the most efficient aid to the school. The great interest now taken in literature in the school as manifested by the discussions at our national and other educational meetings, especially by the formation of the Library Department of the National Educational Association, and by the holding of such a session as this, centers in this thought that in a library, properly availed of, the school finds its one means of redeeming education from absorption in that which is practical and sordid. This was the inspiration of the great movement for school libraries which sprung up fifty years ago. Not that books

might be provided to help in the teaching of geography and history and the other branches of study, but that the higher nature of the pupil might be reached by the appeal of books of power as distinguished from books of knowledge, this was the key-note powerfully struck by Horace Mann in his advocacy of the district school library.

The failure of the school library system and the substitution of the town library is only a phase of the movement inaugurated by DeWitt Clinton in New York, Horace Mann in this State and Henry Barnard in Rhode Island and Connecticut, which movement was and is one for the spiritualizing of education. What the district school library could at best do imperfectly the town library should accomplish much more efficiently, in bringing the pupil into contact with the books which represent the best thoughts and the best feelings of the world's greatest authors. The advantages which the public library has over the district school library are chiefly two, it has a librarian more or less skilled in books and able to take care of them, and it has a much larger range and better selection of books. It can send to the schools successive lots of books of superior quality and attractiveness, and with a constant sprinkling of new publications and fresh bright copies of books which have become old and worn.

Let there be a clear conception of the object in view and the details of management will be easily worked out or learned from others who have already worked them out. This object is twofold. First, it is to create the reading habit, to foster bookishness. A great boon this to a child—one of well-nigh incalculable value.

Bookishness is not a very pretty word, but it expresses what I mean better than any other that I can think of. By it I mean an easy familiarity with books, some knowledge of the technicalities connected with them, which will enable one to understand the distinction between a book, a volume and a copy, and some skill in handling them, in finding a given article in an encyclopedia, for example. I also mean such a smattering as free contact with a library will give a child, of knowledge of authors and what they have written; also, a certain fondness for books which will lead a person going into a room where there are books to want to handle them and look into them, and which will enable one—this is a very important point in these days—to resist the seductions of the newspaper and the magazine in their demand for all one's reading time. This bookishness (can you give me a better word?) will grow up with and in a child who is in daily contact with good books, especi-

ally under the influence and contagion of an enthusiastically bookish teacher. (And no influence of the library can be better than that exerted on the teachers in making them bookish.)

But I said the object of placing these library books in the school is two-fold. Not only should the habit of reading be formed and a certain bookishness stimulated, but there should be an intelligent direction of the reading of pupils on the part of teachers, to the end of the cultivation of good taste and ultimately the formation of character under the influence of the best books. Saying something of this kind to one of our professors the other day, he remarked: "Then the teacher should be an expert in books." Yes, that is what is wanted. It is beginning to be felt that the teacher's training is not complete without a course, not in "English literature" or in literature in general, but in books—in a certain sense in bibliography.

I said at the beginning that I thought the moral would be obvious, that the Normal school must take cognizance of the public library and its value to the school. If the advance in educational lines has been such as I have indicated, and parallel with that advance the public library has been developed to the point of meeting quite completely the demand for literature and art (the limitations of time have prevented my referring to pictures from the library used in school work—a most important phase of the subject)—is not the logic irresistible that the teacher must be an "expert in books." By one more step of the same logic, this expertness must be acquired in the Normal School. The five years average school age of the American child is too short for any of it to be lost while inexpert teachers are learning the art of teaching while practicing it. This is what our Normal School system means. And we claim that the needed expertness in books lays upon the Normal School the necessity of such training, largely of a laboratory character, through the use and handling of an excellent general and miscellaneous library, administered in a thoroughly expert way, and with a reasonable amount of class-room work and lectures.

Would this not seem absurd on the face of it, if the Normal School gave a larger share of attention to making the teacher expert with the tools for the hand, than with those for the head and the heart? And yet we see them on every hand thoroughly equipped for manual training, but with little provision for book expertness. May the next decade give you Normal School principles and State Boards of Education ground to say "We have changed all that!"

Should the School Attempt the Circle of the Child's Training or Address Itself to the School Segment?

By Superintendent Lawton B. Evans, Augusta, Ga.

Supposing that there is such a thing as a Circle of the Child's training, what are its segments? Evidently, the first and most significant is that portion of his life when as infant or child he is altogether under the influences of his home surroundings and his young playmates. Unquestionably he receives impressions and directions, physical, mental and spiritual, that endure for life, some of which should endure and some of which should be modified or changed entirely.

It is safe to say that whatever influence a child is born with and lives under to the time he enters school, will persist. If the home life is wholesome and co-operative it will probably remain so. If the home life is unwholesome and antagonistic it will probably remain so. The fact that a child starts to school when he is seven years of age does not altar or modify his home conditions.

He enters the segment of another influence, but carries with him the modifying conditions that have controlled him in his primary years. These modifying conditions continue to delight or perplex the teacher who is responsible for the next era of the child's training.

At one time in the history of education when a child entered school his purpose was to learn how to read, how to spell, how to write, how to calculate and the simple facts of history and geography. It was all mechanics, withdrawn from life entirely, and his education was indeed a simple segment in his experience. When he left school he knew a good many things and was fairly capable of learning how to do a good many other things, but his short life had to be welded to his after life by a fierce heat of adjustment, and often the welding was difficult and insecure.

Nowadays we are trying to think differently, and instead of regarding school life as a segment of life, it is rather a condition of life. It is all of life that is suited to a child of school years. At home he should have had all of life that he could understand as an infant, and now at school he undertakes all of life in the many phases that he can appreciate.

In this view there is no school segment, as separate from other segments in the circle of his years, but there is a school ingredient

that enters with other ingredients to make up the man; there is a school influence which added to other influences make up his character; there is a school element that combines with other elements to give tone and vigor to the man.

If we should adhere to the school segment, what would we do? We would teach a child to read, and then leave him to read anything or nothing. We would teach him to write a good hand, spell some long and hard words, parse or diagram intricate sentences, and leave him vacant as how to put all these together in his own composition. We would teach him to solve puzzling problems for the sake of mental discipline, and leave him unrelated to the world of business, and he could recite many long and needless facts in history and geography. Indeed he would be a small encyclopedia of knowledge, much of which he would forget, with the student habit so fixed upon him that he finds himself out of adjustment with and rejected by the world of affairs, unless, as happens generally, his own good sense remains intact and he learns out of school the very things he needs to learn in school.

I really believe that the best thought of the profession urges the breaking away from that mechanical perfection in which pupils do startling things from memory and perform prodigies of work that the successful man complacently applauds as beyond him. Instead of this the thought of the hour is to have a child related in his work and enterprise to the affairs of the world, natural, mechanical, financial, governmental, spiritual, cultural.

This interest should be a child's interest and the problems he solves should be a child's problems, but they sweep the whole field of life's experience, and though the detail of a man's thought and power is impossible, yet the main facts are there, and the wide-eyed boy stands upon the threshhold of the world's work and longs to take a part in it and be of it, and the real school will some day emerge from the confusion of the modern curriculum and will show a child how things are done—a lesson that the world has learned through bitter centuries.

And so we are trying not merely to teach a child to read, but to give him the uplift gained by an insight into the great literature of the world. Reading assumes a spiritual aspect, rather than a mechanical one, and we strive for intellectual appreciation and sympathy with what is best rather than for glib rendering of hard extracts. The age for puzzle problems is passing and we teach how the business of the world is done and what business is done. Mere parsing is no longer considered good grammar teaching, but good

speaking and correct sentence making is more valuable. It is better to make good sentences of our own than parse those of others. Content is greater than form. It is of more value to write a good thing in a fairly legible hand, than it is to copy a good thing in perfect penmanship. We are studying natural forces and facts at first hand, are working out the problems of manual expression and of home keeping, rather than reading about them in dull books. This is a school age of acts rather than of facts.

In all this we are not necessarily adding to the burden of our curriculum, but we are leaving undone many of the needless things we once did, and are relating all the other things in such a way that each study supplements and supports the other. The curriculum then becomes one thing instead of many things. It is presented to a child in the way it comes to him in life, and school goes on outside the room as well as inside.

In this larger sense the school interprets and explains life, as it is going on all around us—the business life, the social life, the spiritual life, the life of the natural world as modified by man's need and enterprise. Then when a boy finds himself out of school he finds the world ready for him and himself ready for the world.

Nor need we expect to teach a child many things as compared with what he will afterwards learn. We can but give him a glimpse into literature, science, history, art and the world's affairs. If he desires to learn more of any one department there are the colleges, universities, special schools and the apprenticeship of the world itself. We are foolish to attempt to make experts in a dozen different things. In the lower schools it becomes a mental and moral question, and the child's attitude toward all things is more important than his aptitude in one thing. It will be a happy relief to the children when teachers cease to cram it in, and the old nursery measures be abandoned when the innocents are ordered to shut their eyes and swallow.

The burden of school teaching today is not the enlarged and enriched cirriculum, but it is the senseless grind of many different and unrelated facts to teach as facts and not as forces. It is the restricted teacher bound to the text and the required course for the year and the examination questions. It is the long dull page about nothing in particular. What wonder that some schools are prisons where there is no view of life, and some teachers but jailers and taskmasters. Real teaching puts the child in the centre of the circle of the world's interest, and shows him the great machinery in motion all around him. He catches glimpses of every phase of life, chooses his lot and prepares himself for his destiny.

Trade Schools—An Educational and Industrial Necessity.

By MARY S. WOOLMAN, Manhattan Trade School for Girls, New York City.

An army of children leave school and begin to work when they are from 14 to 16 years of age. In the United States there are almost 2,000,000 boys and girls under 15 toiling in fields, factories, mines and workshops.

A large number of them began work as soon as the compulsory school years were over (about 14 years of age). They obtained positions, not on account of their preparation or adaptability to them, but because they were forced to take the first thing that offered as their wage was needed for their own or their family's support. Four-fifths of such children have not graduated from the grammar grades. Their education, checked at a vital time, is not adjustable to trade conditions. They are seldom worth even the small wage paid them. They therefore lose their positions, drift from trade to trade, become discouraged and often fail morally and physically, for they can not make a living wage.

The apprenticeship system has passed with us, and yet trade itself fails to give a broad training in its own principles. Our manufactured articles lack in beauty, for skill and taste can not reign where the producers have no adequate preparation for their work. Competition, the rush of the workroom, the necessity for each to earn all he can in the busy day unfit the market for this duty. Young workers, therefore, must enter employments where little intelligence or manual skill is required, as their ignorance closes to them the high grade industries. The employment of such young workers benefits neither the children nor the trade. The industries of the country and the well being of society would be advanced by retaining them in school and giving them special instruction for their life work.

The conditions in the factories are very hard for the child of 14. For instance, a little girl may be ushered first into a room full of electric power operating machines which are rushing forward at the rate of 4,000 stitches a minute. Her first duty is perhaps to pull threads, to sort silks, to run errands or to assist the operators. It is difficult for her to learn to work a machine. In the meanwhile her salary is very small. She finds it hard to make even $3 a week. It often takes several years to rise to $5. In some high

class factories it is considered so desirable for a girl to get an entrance there and learn the trade that the employers pay her little or nothing the first year. By and by, perhaps, she does learn to work the machine. Then she becomes so intent upon the piece work in order to make as large a wage as possible that she finds it difficult to progress to more skilled processes. Such children coming directly from school, often without graduation, have little manual skill, do not think clearly and are ignorant of many important things which would help them to rise. Not one thing in their homes or school training seems to help them in what they have to do now. They must pick up their trade as best they can. They seldom become skilled. While our general ideas of education are good and the greater number of our children will go into industrial life and as education has failed heretofore in making them a success, we need to face the conditions and remedy the faults as quickly as possible.

Laws to keep children out of trade until 16 are of little avail if they will not remain in school, for idleness between 14 and 16 is pernicious. Laws to keep them in school longer are unfortunate unless education is adapted to their special needs. These young workers are quick to recognize the real thing and to discard such useless courses or make believe trade work as are sometimes offered. Schools claiming to train for trade, where large numbers of children have gone, have been almost depleted when it was discovered that the work was not adapted to its purpose.

Investigation has shown that many of the working children would have remained longer in the public schools if good trade or industrial courses could have been offered to them. What these children who enter trade want is an educational foundation which they can utilize in their lives and later a training which will prepare them to earn a living wage that they may be able to enter industries which offer opportunities for interesting occupation suited to their ability and where they can rise to better wages. An ordinary untrained girl coming directly from the public school is handicapped in that she finds her elementary school education inadjustable to conditions. She usually therefore must enter one of the unskilled industries.

The special school or continuation classes are greatly needed to help her and should be organized as quickly as the subject is well enough understood by the educators to insure work which is fitted to its purpose. Technical education has been too frequently confused with that of trade, but does not fit its students for workshops.

A girl may be able to grasp the scientific basis of her work and be able to construct garments satisfactorily and at the same time be of no more use in a trade workroom than the greenhorn. In fact, trade prefers the latter, as the usual technical training is too superficial and has covered too much ground to be adapted to the swift methods and specialized work in the business house, while the one trained by it is often rather set in her ideas of her own ability. The same may be stated of the courses in a Manual Training School. It is not a question of value between the two. The kind of work is different. Trade must have what it needs. The kinds of instruction needed by a girl that she may be well fitted for trade can not be decided by the most skilled academic teacher nor by the ablest psychologist. Contact with trade will alone give this information. Nor is it merely a question of skill in specialized parts of trade. It includes also the opening of the mind and unfolding of the spirit of the student that a better type of worker may be provided. For this purpose the vocational work offered in these schools should be definitely related to the general system of education. The oft repeated cry that the fostering of trade instruction will tend to make us too materialistic as a people need not disturb us, for already the fact has been proved that whatever fits a child best for his place in the world tends to develop him to his highest physical, mental and moral point.

In the meanwhile the manufacturers are in need of skilled labor. There is a dearth in women's trades of those who can run the more complicated and difficult machines and much money goes to Europe for work which can not be obtained here. Embroidered chiffon, passementerie, hand or machine embroidered evening gowns are made abroad to a great extent, for the American workroom can not furnish them. The speaker has visited numbers of these workshops in France, Belgium and Switzerland. She also found American citizens whose factories were abroad that they could take advantage of the trained workers. The nations on the Continent of Europe have been wiser, industrially, than the English speaking people, for they long ago foresaw and met the need for training their working classes. The varied systems of trade education for both boys and girls, their beneficial effect on the industries and on society, the intense interest taken by the State and by all classes of citizens in this practical education were a revelation to the speaker, who spent six months in constant investigation. The great number of trades for which training is given is astonishing to a foreigner. Belgium, Germany and France have suggestive and inspiring

courses. These countries are reaping the benefit of their forethought. Many expert trades flourish abroad which can not be conducted in this country unless by the aid of the foreign operative.

There are, happily, signs of an awakening in America from the long sleep of indifference. Investigations are being made and private undertakings in many cities have arisen to meet the need. As an illustration of what may be accomplished, let me tell you the results of an experiment in trade education in the Manhattan Trade School for Girls of New York City. The trades selected were those in which in New York require large numbers of expert workers, where training is difficult to obtain, the wages good, the chances of promotion satisfactory and where favorable conditions obtain in the workroom. It was not felt enough to train for skill alone. A fundamental point was to find some plan to utilize and supplement the education of the common school. A practical, immediately available, business education was devised by which the worker might have a knowledge of and an interest in her trade and be able to express herself orally or in writing in connection with it; by which her arithmetic could be made available in simple trade transactions and in detailed accounts, by which she should know the laws affecting her, the relation of her work to her employer's success, and by which higher ideals of life either in trade or in the home might be given to her.

A good trade worker should have taste and artistic appreciation, hence a practical course in art directly connected with each trade was developed. Daily simple physical exercises for reaction from strained positions and at intervals serious discussions on the laws of health ensured the keeping of the body in good condition and the possible attainment of a higher point in hygienic living. In a word, the Manhattan Trade School for Girls aimed to make the training ethical, economic and artistic as well as skilled, that the best efficiency might be attained and the body be vigorous enough to be a good machine.

It was fully realized that this work must be done in a shorter time and better than at present afforded in the workrooms if it would be of real value. The doors of such a school must be ever open that advantage may be taken of slack seasons for training and of busy seasons for placing the girls. The tuition must be free, or it would not reach the class who need it most, and who, by their poverty, keep down the wage in the market. Some, indeed, would be too poor to even accept free instruction, and help must be given when absolutely necessary and in proportion to the need.

(Sometimes it was found mere car fare was enough, at other times an equivalent of a small wage could alone release the young worker.) The school found incessant problems before it, but tried practically to meet them all.

Four years have passed and the results may be seen of all. A few may be summed up briefly:

Trade acknowledges that the training of this school does fit the worker for the regular shop. This point is rendered plain by the constantly increasing wage offered to the pupils, the fact that the demand for them is greater than the supply, and also that firms which have tried them desire more of them and even offer premiums for them.

Experience has shown that a girl of ability, after eight months to a year at the school, can earn in weekly wage from $5 upward, and that many of the girls, after a short time in the market, can make $8 or $10 per week before they are seventeen, while on piece work some are receiving $12 to $16. Without training it is difficult for the ordinary worker to rise to $5 in two years.

The wage-earners in New York, after carefully studying the school, have given it enthusiastic support. They have formed in busy workrooms numerous auxiliaries to obtain money. These workers are keenly alive to the difficulties encountered in gaining a foothold in the market and in making a living wage, and have shown themselves willing to deny themselves that money might be collected to help the young beginners. More than $2,000.00 (virtually in pennies) was collected by them in the past year and they have also been practical and valuable friends to the pupils and to the school.

Ethical results are apparent in the pupils, such as higher standards of living, improved homes, and a more serious understanding of their relation to their employers, fellow workers and product.

The remarkable demand for the instruction has made it necessary to procure a new building. In the old quarters on Fourteenth Street, 150 girls made overcrowded conditions. In the new ones at 209-213 East Twenty-third Street, 800 can be accommodated in the day classes and a heavy pressure for night work has been answered this fall.

If one small school can in so short a time demonstrate its usefulness, if the pressure from employers of labor, wage-earners and young beginners has been so great that in four years it has been necessary to so greatly increase the accommodation, it shows that instruction of this character may be of value. Boston was quick in

following and has, in the Boston Trade School, a similar work and record of success. Other industrial cities should also meet their need by private enterprises until public instruction can give its aid.

Some Conditions of Good Memory.

By H. A. Peterson, Peabody College for Teachers, Nashville, Tenn.

A good memory has never been considered a reliable sign of the presence of a good mind in general. Many of us have marvelled at the memory of the hat man at the hotel who can take a hundred hats and never make a mistake in giving them out, or of a good hotel waiter who can take from four to six complete dinner orders without a mistake in serving them, but we do not consider these feats signs of a high order of intellectuality in general. We do, however, acknowledge some things to be such signs, notably ability to reason, or ability to comprehend generalized descriptions and explanations. As a result of some investigations of mental abilities which I have recently made among Peabody College students I believe the converse is generally true, namely that persons whose minds are good in other respects have at least average memories and never poor ones. I think the reason for this is that at least an average memory is indispensable to a good reasoner, or generalizer, or interpreter of generalizations.

Aside from an average amount of inborn retentiveness, one of the prime essentials for remembering anything is understanding it. In its extreme form everyone grants this. Of course one cannot retain what he reads in a chemistry text-book without a knowledge of chemistry, and much less can he hope to remember it. But many fail to see that their mediocre remembrance of an experience is due to their partial (but only partial) comprehension of it. The ability to understand implies that one has an apperception-mass along the line of the matter presented—a stock of correct ideas gained by experience—which will rise when it is presented, make connections with it and thus interpret it. A recent experimenter gave to a fifth grade class a fable to read and memorize as much as possible of in three minutes. The fable began. "There was once in the eastern part of Egypt a king whose reign had long been a course of savage tyranny; long had he ruined the rich and distressed the poor." One ten-year-old boy, whose powers of comprehension were

below what is normal for that age, wrote in recall the same day for the latter part of the above: "Who had reign over the rich and discresed the poor in dammand." Two days later his recall ran: "Which ruled over the rich in demand of the poor," and a month later it had shrunk to: "Who ruled over the rich and demanded the poor." Two persons, one a psychologist and the other an adult who had never studied psychology, read a popular article about the application of psychological reaction experiments to testing the guilt or innocence of persons suspected of crimes or other offenses. Lists of miscellaneous words are read to them and the time it takes them to speak the first word suggested by each is noted. Some of the words will touch a guilty conscience if they are guilty, and the confusion will show itself in a lengthening of the time required for answering. Various reaction times are mentioned in the article, varying between three-fourths and six seconds; the way in which the experiments are conducted is described, all of which the psychologist is certain to recall more correctly and fully than the other person, because of his past experience with such experiments. The inexperienced person might be undecided whether a noted criminal's normal reaction time was three-fourths of a second, or one and three-fourths, or two and three-fourths, but the person experienced in such matters knows that the second is improbable and the third much too long. Thus his past experience tends to prevent errors. But what is still more important, the experienced person classifies the details of a new matter as they are presented or soon afterwards. He places them with similar experiences of his, and the act, or rather constant repetition of it, greatly facilitates recall. The classificatory heads, and old experiences under them are *hooks,* as it were, by which he can get hold of the details of the relatively new experience. I am the better able to recall the educational practices of Vittorino da Feltre because of the fact that I have classified him as a broad humanist of the ancient Athenian type.

But comprehending a thing is more than having *some sort* of experience with which to connect it. Any old experience will not do. Among fifty persons who hear a popular lecture on a subject to any extent technical—say on photography or wireless telegraphy—there will be all degrees of comprehension extending down to next to nothing, and depending on the degree of similarity between their past experiences and the apparatus described. And by past experience I refer chiefly to first-hand experience—direct contact with things. Reading or mere hearsay—lectures, for instance, will not

give the necessary apperception-mass. We need the objective three-dimensional imagery of how the machinery or the chemical actions look and behave. The medical schools understand this, and hence laboratory work accompanies or precedes reading. I wish I might say the same of all high schools, normal schools and colleges. In conclusion then, the second requisite for remembering a fact is understanding it, and you can't understand it without having had, or getting concurrently first-hand experience of it, or something closely analogous to it.

The third requisite for remembering a thing is that it have your attention while it is being presented, not occasional and partial, but continuous and complete attention. This, too, is universally conceded, and the question of more interest is how to secure such attention. I shall not attempt to answer it, for it lies outside the scope of this article. My own observations and reflection have led me to the conclusion that the most contributory factors in the problem are first a *connected* content, a story and not a spelling book, concrete problems rather than abstract arithmetical drill, stories or narratives or descriptions rather than disconnected exercises in French or German; secondly, a content that *appeals to the native interests,* or mediate interests which have a connection with some native interest that is not too far-fetched; and thirdly, a content that *progresses or develops.*

Having disposed of these more general and fundamental conditions of good memory I come to some special ones, and here a large amount of experimenting has been done. It has been proved that we remember objects and actions better than words.

Kirkpatrick[1] tested both school children and college students. They were shown lists of 10 words (names of objects) written on the blackboard, the words being uncovered in succession. He also showed them series of 10 objects. When he tested the persons three days later, he found that an average of 6 objects were recalled against 2 words. The words were nouns, but I found that the same was true for actions as contrasted with verbs, the actions being movements of the subject's own body, such as drawing, writing, lifting, scratching, etc.

Miss Calkins[2] found the same was true for lantern pictures contrasted with the names of objects. I conceived the idea of testing whether this remained true when the words, objects and movements were coupled with foreign words as in the following series: Wrofof lamb; delb shirt; utsl crow; latwo desk. The question is then the same as the one confronting the teacher of languages in the

matter of acquiring a vocabulary. Shall he try to connect the foreign words directly with the things they mean, or content himself with connecting them with the corresponding words in the language of the pupil? This was one of the two central points in Comenius' great reform, the other being the provision of a series of graded readers which should serve as an approach to the classics. I found that still the things were better recalled than their English names when the subjects were shown the foreign words alone in altered order, and asked to recall what word or object or movement had gone with each.[3]

A while ago I showed that first-hand experience was indispensable in understanding and remembering the sciences, and now I have shown that in learning languages the foreign words are better remembered when they are connected with the things they denote. As a caution it may be well to point out the limitations of first-hand experience. In science as *beginners* we need first-hand experience, but we look forward to the time when we can do without it, i. e., when we can understand verbal descriptions and explanations without resort to the slow, very slow, process of demonstration. In language learning certainly the learning of the vocabulary is only a small part. There is acquisition of idiom, of syntax, of the delicate differences between the same word used in different senses, many of them purely figurative. This is gotten only by wide reading and conversation. Again the number of words whose meaning can be demonstrated in a class room even by a very realistic teacher is decidedly small.

Another fact demonstrated by the laboratory is that complex things are better remembered than simple ones. One reason why they are better remebered is that they keep the attention better, and I wish to illustrate this fact first. Suppose the seven pairs of figures shown in series A of the accompanying figure are shown to a person one pair at a time. Suppose the first pair is shown 5 seconds, and the subject is asked to look at them and divide the 5 seconds between them as equally as possible. He then closes his eyes and remains passive 60 seconds while the experimenter records how much of the time each figure is in his mind. He can do this if the subject will announce the changes of images in his mind by using the four words, "star," "circle," "both," "neither." Suppose the same experiment is performed with the remaining six pairs. It is found that the complex figures occupy one's mind more than the simple ones. Another variety of simple and complex figures consists of two circles of gray cardboard about four inches in diameter.

They are alike except that one circle has a few lines on it concentric with the edge. The rest of the series consists of other pairs of geometrical figures of similar size and marking. The marked figures get more attention than the plain. If small strips of cardboard about one-quarter of an inch wide and four inches long are cut, two in the form of straight lines, two in the form of right angles and the fifth in the form of an acute angle, and if one of the lines is mounted on a background in vertical position and the other in horizontal, and one of the right angles mounted resting on its side, the other on its point, each of the two lines may be taken with each of the three angles. Thus a third variety of simple and complex figures is formed. The only difference between the line and the angle is the slight increase in complexity due to bending the line. The angles get the attention better than the lines. A fourth variety is shown in series B. Here the two kinds of figures making up a pair consist of the same lines, but in one case they form a simple familiar continuous figure, while in the other they suggest a number of more unusual and complex ones. The interrupted figures get more attention during the 60 seconds. The time averages for the four kinds of simple and complex figures are 38 seconds for the complex and 28 seconds for the simple.[4]

Other experiments show the better *memory* for the more complex. If a subject has to learn by heart series of nonsense syllables, each series containing 9 syllables, he can learn them quicker if the syllables are shown through different holes around the edge of a sheet of cardboard, than when all 9 syllables are seen through the same hole. The very difference of position gives the syllables individuality. If the syllables are printed on cardboard of different colors they are learned more quickly than when they are printed on white. If the subjects are required to relearn the series three days later we get the same result. Fewer repetitions are required for the syllables whose spatial position is varied than for those shown through a single aperture, and fewer for the colored than for the plain.[5] I believe these experiments such as Dr. Meakin's and Miss Gordon's contain the explanation why objects and movements are better remembered than words. It is because the words when presented detachedly are so monotonous, while objects and movements have enough complexity to give them variety, hence individuality. Each stands out from the others more.

Another interesting question is whether learning a thing through several senses at once makes it better remembered than learning it through one sense only. For example, can we memorize text

quicker by reading it aloud than by merely reading it with no enunciation. Or is it any advantage for a professor to use the blackboard freely during his lecture? Are printed syllabi in the hands of auditors useful beyond saving the trouble of taking notes? Do they enable the listeners to grasp the thought better and retain it better? Quite a number of experiments have been made along the line of this problem, and although rather empty material, was used such as nonsense syllables, numbers, colors, letters of the alphabet, position in a series, still I believe the results would hold good for the practical questions of daily life. These experiments have uniformly shown that getting the experience through several senses results in better retention than when it is gotten through one sense only.

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[1]Kirkpatrick, E. A.: Psychological Review, 1894, Vol. I., p. 602.

[2]Calkins, W. M.: Psychological Review, 1898, Vol. V., p. 451.

[3]Peterson, H. A.: Psychological Review, Monograph Supplement No. 17, p. 207.

[4]All of the above experiments on the influence of complexity on attention are taken from a monograph by Frederick Meakin, entitled "Mutual Inhibition of Memory Images," in the Psychological Review, Monograph Supplement No. 17, p. 235.

[5]Gordon, Kate: Psychological Review, 1903, Vol. X., p. 267.

*Spelling and Arithmetic—A Comparison of Results Obtained in Springfield, Mass., and Texas.**

By MISS C. YEIDEL, University of Texas.

In every field of activity changes are looked upon with disfavor by certain members of society, who may be termed the "hyper-conservatives." They walk in the trodden path and cannot countenance the advent of new theories and ideas. Until the superiority of the new over the old can be successfully demonstrated, the adherents of the old regime will long to return to the programme of the "good old days." Especially is this true in the field of education.

Modern schools and modern methods are being constantly condemned by nearly all classes of people, and the statement is often made that the school of half a century ago, with its narrow curriculum, produced better spellers and cipherers than the school of to-day, with its more elaborate programme. For want of definite data to prove the contrary, teachers have been compelled to let this statement go unchallenged.

A very fortunate find by Dr. Balliet of Springfield, Mass., has made possible a comparison of the results of the methods employed half a century ago, in spelling and arithmetic, with those of to-day; which comparison establishes, almost beyond a doubt, the superiority of modern methods. In the garret of an old high school in Springfield, there was found a bound volume containing sets of examination papers in spelling and arithmetic, bearing the date of 1846. The exceptional value of this find was recognized some years later by Principal Riley, who used it as the basis of an educational test. The same words and problems which were found in the tests of 1846, were submitted to two hundred and fifty Ninth Grade students of Springfield, in 1905, and the results showed that the pupils of '46

*This study was undertaken at the suggestion of Dr. W. S. Sutton, to whom, as well as to Dr. Josiah Moses, I am indebted for suggestions and direction.

were inferior, as spellers and arithmeticians, to the pupils of our own generation.

Believing in the importance of such investigation, educators have duplicated these tests in various sections of the country, especially in Goshen, Indiana, and Brooklyn, New York. Not long since, the questions taken from the list of 1846, were sent out to a number of High School Superintendents in Texas, twenty-one of whom responded by sending papers from Eighth and Ninth Grade pupils.

At the suggestion of Professor W. S. Sutton, these pupils and their teachers were entirely ignorant of the purpose or history of the tests. To insure honest results, the following request was incorporated in the questionaire: "Pronounce all words distinctly and naturally without undue emphasis on syllables."

The following were the list of words and questions in arithmetic:

SPELLING TEST.

1. Accidental.
2. Accessible.
3. Baptism.
4. Chirography.
5. Characteristic.
6. Deceitfully.
7. Descendant.
8. Eccentric.
9. Evanescent.
10. Fierceness.
11. Feignedly.
12. Ghastliness.
13. Gnawed.
14. Heiress.
15. Hysterics.
16. Imbecility.
17. Inconceivable.
18. Inconvenience.
19. Inefficient.
20. Irresistible.

ARITHMETIC TEST.

1. Add together the following numbers: Three thousand and nine, twenty-nine, one, three hundred and one, sixty-one, sixteen, seven hundred, two, nine thousand, nineteen and a half, one and a half.

2. Multiply 10008 by 8009.

3. In a town five miles wide and six miles long, how many acres?

4. How many steps of two and a half feet each will a person take in walking one mile?

5. What is one-third of $175\frac{1}{2}$?

6. A boy bought three dozen oranges for $37\frac{1}{2}$ cents and sold them for $1\frac{1}{2}$ cents apiece; what would he have gained if he had sold them for $2\frac{1}{2}$ cents apiece?

7. There is a certain number, one-third of which exceeds one-fourth of it by two; what is the number?

8. What is the simple interest at 6 per cent of $1200 for 12 years, 11 months and 29 days?

In grading the papers, no credit at all was given for omitted words or examples, or for examples containing the slightest mistake.

The following figures show to what extent pupils of Texas are more proficient in the above subjects than those of Springfield in 1846, and also how they compare with the present pupils of Springfield, Massachusetts, Goshen, Indiana, and Brooklyn, New York:

EIGHTH GRADE SPELLING.

School 1	56	58	114	627	690	1,317	56	58	57
School 2	11	16	27	116	191	307	52	59	56
School 4	13	22	35	137	238	375	52	54	53
School 6	13	15	28	117	138	255	45	45	45
School 7	10	18	28	130	259	389	65	72	69
School 8	20	46	66	222	611	833	55	66	63
School 9	12	23	35	143	251	394	59	54	56
School 10	24	31	55	297	402	699	62	64	63
School 12	31	61	92	399	777	1,176	64	63	63
School 13	6	6	12	63	58	121	52	48	50
School 15	12	8	20	116	94	210	48	58	52
School 17	30	54	84	354	646	1,000	59	59	59
School 18	11	19	30	129	253	382	58	66	63
School 19	12	24	36	139	338	477	57	70	66
School 20	16	26	32	180	200	380	56	38	59
School 21	14	21	35	182	310	492	65	74	70
Total	291	439	730	3,351	5,456	8,807	57	61	60
(3) Goshen, '06			101						46
(2) Springfield, '05			250						51
(1) Springfield, 1846			85						40
Texas, '06	80	159	239		28	34	31		
Springfield, 1846			15				17		

School No. 3 sent no 8th grade papers.
School No. 5 sent no 8th grade papers.
School No. 6 sent no 9th grade papers.
School No. 7 sent no 9th grade papers.
School No. 11 sent no 8th grade papers.
School No. 12 sent no arithmetic papers.
School No. 13 sent no 9th grade papers.
School No. 14 sent no 8th grade papers.
School No. 16 sent no 8th grade papers.
School No. 21 sent no 9th grade papers.

NINTH GRADE SPELLING.

Texas, '06—									
School 1	28	31	59	344	400	744	61.5	64.5	63
School 2	5	19	24	53	252	305	53	66	63
School 3	14	15	29	148	212	360	53	70	62
School 4	11	19	30	126	291	417	57	76	69
School 5	4	19	23	67	361	428	83	95	93
School 8	7	13	20	93	197	290	66	75	72

Note—Instead of giving the names of the schools it was deemed best to number them.

School 9	9	25	34	104	297	383	58	59	56
School 10	24	44	68	308	679	987	64	77	72
School 11	16	25	41	222	242	464	69	48	56
School 12	26	44	70	342	585	927	66	66	66
School 14	10	8	18	134	124	258	67	77	71
School 15	4	8	12	34	107	141	42	66	58
School 16	50	47	97	774	566	1,340	77	60	69
School 17	11	16	27	168	227	395	76	70	73
School 18	5	11	16	54	142	196	54	64	61
School 19	10	20	30	140	317	457	70	79	76
School 20	8	28	36	128	456	584	80	81	81
Total	242	392	634	3,239	5,457	8,676	67	70	68
Springfield, 1905			250						51
Springfield, 1846			85						40
Texas, 06				98	229	327	41	59	5
Springfield, 1846						15			17

In the Ninth Grade, School 9 made 56 per cent in spelling, or 12 per cent below the total average, and 70 per cent in arithmetic, or 15 per cent below the total average, while School 5 made 93 per cent in spelling, or 25 per cent above the total average, and 94 per cent in arithmetic, or 9 per cent above the total average. Again, School 20, which made 96 per cent in arithmetic, or 11 per cent above the total average, made 81 per cent in spelling, or 13 per cent above the total. In other words, Schools which are exceptionally good in one subject are at least not below the average in the other, while Schools which are below the average in one subject are, as a rule, below the average in the other.

A comparison of the sexes shows that girls are better than boys in spelling, but poorer in arithmetic.

With these results before us, one is led to enquire whether the explanation of the inferiority of the results of 1846 may be found in the conditions existing in the Springfield school at that time. But after careful examination, it is found that the children of '46 were attending school under conditions as favorable, if not more so, than those under which children of to-day attend.

The school building was a brick structure and in good condition.

EIGHTH GRADE ARITHMETIC.

Texas, '06—									
School 1	53	53	106	307	291	598	72	68	70
School 2	11	16	27	59	64	123	67	50	57
School 4	13	26	39	90	167	257	86	80	82
School 6	14	16	30	70	69	139	62	54	58
School 7	9	17	26	62	117	179	86	86	86
School 8	20	37	57	143	254	397	89	82	87
School 9	11	22	33	64	126	190	72	71	71
School 10	23	31	54	152	183	335	82	73	77
School 13	6	6	12	34	24	58	70	50	60

School 15	6	11	17	73	35	108	73	83	79
School 17	19	35	54	101	195	296	66	69	68
School 18	11	18	29	73	110	183	83	76	79
School 19	11	22	33	72	139	211	81	79	79
School 20	16	16	32	104	108	212	81	84	82
School 21	24	32	56	141	198	339	73	77	75
Total	247	358	605	1,545	2,080	3,625	78	72	74
Springfield, '05			250						65.5
Springfield, 1846			85						29.4
Goshen, '06			101						87.8
Brooklyn, '06			94						71.2

NINTH GRADE ARITHMETIC.

Texas, 1906—									
School 1	39	42	81	280	304	584	89	90	90
School 2	5	19	24	25	86	111	62	56	58
School 3	14	15	29	104	107	211	92	89	90
School 4	11	19	30	78	132	210	88	87	87
School 5	4	19	23	29	145	174	90	95	94
School 8	9	15	24	62	111	173	86	93	90
School 9	10	25	35	53	144	197	66	72	70
School 10	24	44	68	157	288	445	81	81	81
School 14	10	7	17	76	46	122	95	82	89
School 15	4	10	14	30	168	98	93	85	87
School 16	50	54	104	372	369	141	93	85	89
School 17	17	35	52	113	218	331	83	79	79
School 18	6	11	17	43	72	115	98	81	84
School 19	8	18	26	45	122	167	70	84	88
School 20	8	28	36	67	216	278	97	96	96
Total	219	361	580	1,529	2,428	3,957	87	84	85
Springfield, '05			250						65.5
Springfield, 1846			85						29.4

In tabulating these results several interesting facts appear which are recorded here. Of the six hundred and thirty-four Ninth Grade spelling papers, three per cent had all the words spelled correctly; of the seven hundred and thirty Eighth Grade, ten per cent of all were entirely correct.

In arithmetic, thirty-seven per cent of Ninth Grade papers, and seventeen per cent Eighth Grade, were perfect. These per cents mean a great deal when compared with the results of '46, which show no perfect papers. Of the eighty-five pupils of 1846, thirty-three per cent missed ten or more words out of the twenty. Only eleven per cent of our Ninth Grade, and twenty-nine per cent of our Eighth Grade, did the same thing.

In speaking of the arithmetic of 1846, Mr. Riley says: "More

Note—The total percentages are calculated on the basis of total number of words spelt correctly, and not on the combined percentages of boys and girls.

than one-fourth of the examples were passed over as too difficult to attack, and the incorrect answers were so far from the mark as to overwhelm one with the conviction that the children were entirely lacking in power to mentally approximate the results." Of our Ninth Grade pupils, only six per cent missed more than half of the examples, and in the Eighth Grade, thirteen per cent. Sixty-three per cent of Ninth Grade, and sixty-one per cent of Eighth Grade pupils made seventy-five per cent or more.

Another interesting fact brought out by the papers is the rather large mean variation in the percentages made by the different schools. Thus, School 6, Eighth Grade, made only 45 per cent in spelling, while School 21 made 70 per cent and School 7, 69 per cent.

In Arithmetic, School 2, Eighth Grade, made an average of 57 per cent, and School 6, 58 per cent, while School 8 made an average of 87 per cent, and School 7, 86 per cent.

Likewise in the Ninth Grade, Schools 9 and 11 made an average of 56 per cent in spelling, while School 5 made an average of 93 per cent, and in Arithmetic, School 2 has 58 per cent to its credit, while School 20 has 96 per cent and several others 90 per cent.

Owing to want of time I was unable to attempt to ascertain the causes of these exceptional figures, and the methods employed. Very likely, in the schools which made averages far in excess of the total average, the particular subject was strongly emphasized and well taught; the reverse being true, perhaps, of those schools whose averages were far below the total average.

Again, it is interesting to note that the schools which made the highest averages in spelling are not the ones which made the highest averages in arithmetic, nor did those which made the lowest averages in the one make the lowest average in the other. There is, however, a very close relationship between the two subjects. Thus in the Eighth Grade, School 6 made 45 per cent in spelling, or 15 per cent below the total average, and 58 per cent in arithmetic, or 16 per cent below the total average, while School 21, which made 70 per cent in spelling, or 10 per cent above the total average, made 75 per cent in arithmetic, or 1 per cent above the total average, and School 7, which made 69 per cent in spelling, or 9 per cent above the total average, made 86 per cent in arithmetic, or 12 per cent above the total average.

The curriculum in 1846 was narrower than it is now. Reading, writing, arithmetic and geography made up the daily programme,

and that spelling was strongly emphasized, and much time devoted to it, is shown by the following extracts taken from the Principal's report:

"Indeed, ability to spell correctly is deemed highly important, as lying at the foundation of all requirements, without which no person can be accurate or intelligible as a scholar, or even safe from exposure to great mortification in after life.

"Regular exercises are required in this branch (in the high school) which are rigidly criticised until the pupils make it obvious that they are no longer necessary."

These facts show that the school's conditions were favorable. Where, then, is the explanation for the superiority of the modern school as shown in the tests? The answer to this question is found in the word "method."

The modern methods growing out of a careful study of the human mind, its stages and processes of development, have, as it appears, produced not only better spellers and arithmeticians, but also better men and women than the formalistic disciplinarian methods of half a century, and more, ago.

Formerly, spelling was taught as an isolated subject, the child was taught mere letters which meant nothing to him, and in the light of modern psychological investigation, such teaching is unprofitable, to say the least. It is now a common platitude in mental science, that, unassociated facts learned or memorized, are not retained for any length of time, because of the absence of what is known as an *apperception mass.* Modern teachers, understanding the laws of association which obtain in mental activity, no longer consider spelling a subject valuable in itself and calculated to develop the memory faculty, but as something which is important only because of the role it plays in the every-day life of the individual. It is looked upon not so much as an accomplishment as a useful instrument. The pupil to-day is no longer limited to the blue-back spelling book, but acquires the art while studying history, geography, grammar, etc.

The meagerness of the three "R's" is, to-day, supplemented by the plentitude of the modern curriculum. The taste for reading is stimulated, and through reading the child enlarges his vocabulary and learns to spell new words.

It is to be supposed that the words used in the examination were taken from the spelling book in which the pupils of 1846 had regular exercises, and had been constantly drilled. Their inability to spell them was due, not to their unfamiliarity with the words as

such, but to their forgetting the combination of letters which make up the words. This loss of memory is to be attributed to the fact that the words were not met with in their daily reading, nor were they parts of their every-day working vocabularies.

On the other hand, while it is not likely that our pupils had been drilled in the spelling of such rarely used words, as some of those contained in the list, their ability to spell them must be attributed to their wider reading, and larger vocabularies. Such words as "accidental" and "characteristics" which are in common use, were seldom spelled incorrectly by our pupils, while "feignedly" and "ghastliness," two rarely used words, were missed more often.

The following comparison will show the modern method to advantage. It must be remembered that all the words should have been equally familiar to the Springfield pupils. "Accidentally" was spelled correctly by seventy-one per cent of their pupils. In School No. 9 (Ninth Grade), which made the lowest percentage, eighty-nine per cent of the pupils spelled it correctly. "Feignedly" was spelled correctly by thirty-three and one-third per cent of the pupils in 1846; while the pupils of School No. 9, to whom the word was probably not familiar, made the same average.

In the old days, spelling was taught orally. To-day, the child writes the word and thus obtains a clear visual and motor image of it, in addition to the auditory. It has been said that one of the characteristics of modern methods is the substitution, so to speak, of the eye for the ear. Horace Mann says, that, "after the earliest years of childhood, the superiority of the eye over the senses * * * is almost infinite." Certainly the association of several senses is superior to any one. These facts are taken full account of in modern methods.

Much the same may be said of arithmetic as has been said of spelling. Arithmetic is now taught as a practical subject. It is not so much the purpose of the teacher to teach the child to find the simple interest of $1200 for 2 years, 11 months and 29 days, as it is to impart a general principle by which the child may solve any example. The field of arithmetic is no longer blocked off into small squares, each of which contains an example which the pupil must learn to solve separately. Arithmetic is no longer considered an isolated subject, but rather one which has the closest, we might almost say a dynamic relationship to other subjects, and which can be learned properly only when the underlying fundamental principles have been mastered. The child then sees a logical connection between the different examples and principles.

The keynote, in fact, of the modern school is the correlation of the various subjects, and is due to the broader point of view which educators have derived from years of careful and painstaking study and investigation in this and correlated fields. Education is now looked at as a process whose function is the development of the human being, and the preparation of it for complete living in modern society. It is, therefore, coming to be more and more demanded, that he who teaches John Latin must know not only Latin, but John also, and to do this he must study the nature and laws of the human mind, in general, and of John's individuality, in particular. The departments of education which have been established in our leading colleges, afford the teacher opportunity and equipment for just this kind of study. In our own State, the Department of Education in the University of Texas is exercising a most salutary influence in this direction.

Note

The work of the school had been well organized under two able principals, and in 1840 the schools of Springfield had been placed under the expert supervision of Samuel S. Greene. The school year was longer than it is now, and the average age at which children entered the High School was as high as it is to-day. Mr. Riley says: "That as the high school course covered three years, the average age of the pupils of the old high school would be about the same as that of the pupils who are doing the second year's work in the high school to-day. So it is concluded that the tests should be given to Ninth Grade pupils of to-day.

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Meeting of The Southern Educational Associatcon.

The meeting of the Southern Educational Association at Lexington, Ky., during the Christmas holidays was very well attended by those coming from a distance and by the teachers and educators of Kentucky. All meetings were held in the buildings of the State College of Kentucky, which in some respects was an ideal place. It was a matter of common remark by the older members of the Association that the addresses and articles of this meeting were practically all of a high character and better on an average than those of the past several years. The subjects were up-to-date, and keen interest was taken in all discussions, especially in the department meetings, which were all largely attended. The subjects were of a practical nature. The President's address was indeed a very able one, and reviewed the present Southern educational conditions and suggested lines of most effective campaign work for the future. Not so many state superintendents gave their annual report of progress as usual. Superintendent Mark of Louisville presented a very forcible argument in favor of Compulsory Education. Likewise President Johnson of Winthrop Normal College, on Training of Teachers in Library Methods. One of the most timely and scholarly addresses of the Association was that of Superintendent Gibson of Columbus, Ga., on Industrial Education, which will be widely circulated in the South as a campaign document on this subject. Professor Claxton gave a masterly address on the Rural High School. President Abercrombie, of the University of

Alabama, changed his subject and did not discuss negro education, but gave a profound discourse on Public Education and Other Problems. President Glenn of the Dahlonega Agricultural College presented a convincing argument in favor of the County School System *versus* the District System. The addresses of Superintendent Van Sickle, of Baltimore, on some Practical Means for the Improvement of Teachers, and of President Roark of East Kentucky State Normal on Modern Tendencies in Education, were indeed of a high order, likewise the article on State Support of Libraries, by Miss Greene of Montgomery, Ala. President Tighe is to be greatly congratulated upon the success of this meeting. Lexington was indeed a model of hospitality on this occasion, especially with reference to entertainment, receptions, public press, etc., much of which was due to the excellent management of Superintendent Cassidy. The next meeting will be at either Memphis or Atlanta, the time and place of meeting being left to the Executive Committee by the Board of Directors. The following were elected as officers for the ensuing year: President, Professor P. P. Claxton, University of Tennessee; First Vice-President, Superintendent J. H. Van Sickle, Baltimore, Md.; Second Vice-President, Superintendent M. A. Cassidy, Lexington, Ky.; Third Vice-President, Mrs. Bessie W. Birdsall, Winthrop Normal College, S. C.; Secretary, H. E. Bierly, Chattanooga; Treasurer, E. P. Burns, Atlanta, Ga.

Book Reviews.

Fifty English Classics Briefly Outlined. By Melvin Hix. Cloth. $1.25, postpaid. 324 pages. Hinds & Noble.

This book contains a brief analysis, in outline, of fifty of the masterpieces of our language, in the fields of the drama, fiction, narrative poetry, lyric poetry, essays and addresses, and covering many of the "College Entrance Requirements." These outlines should prove a boon to at least four classes of persons, namely:

Those teachers who, from lack of early opportunity, feel the need of such assistance as this book aims to afford. Each analysis constitutes a complete, well-arranged plan for teaching.

Those teachers who, having had ample training, yet because of overcrowding of classes and the burden of "papers," will be glad to use the results of the labor of a fellow-teacher.

All students and teachers who by reason of remoteness from libraries will be glad to have such a collection of quotations from authors and excerpts showing the opinions of critical authorities as to their style, as this book embodies.

That large and every increasing host of private students of literature who, while eager to do genuine library study, feel that they need the guidance of some plan which will render their work systematic, and therefore fruitful.

Most books of the sort are mere question books; this book gives you the answers, in just the shape you want them. The book is absolutely unique. There are no others like it.

A Handbook of Literary Criticism. By William H. Sheran. $2.00. Hinds & Noble.

Any fairly intelligent person who delves attentively in this *Handbook of Literary Criticism,* need never again be at a loss to express himself on literary matters, because it furnishes not merely the requisite knowledge of literature as such and of literature as an art, but also furnishes the very language, the very phrases, the very words themselves, which enable one to talk on literature and literary subjects with that familiarity and that facility which marks one as a cultivated person. Just as our smaller book, Heydrick's *How to Study Literature* (75 cents, postpaid) enables one to master any particular book so as to be able to discuss it intelligently (actually furnishing lists of the right words to describe the author's style

and other characteristics and all the features of the book) so Sheran's *Handbook of Literary Criticism* teaches the student how to approach literature in general so as to talk intelligently about literature in general.

Read the table of contents backwards if it is the human interest in literary appraisal which appeals to you, or familiar acquaintanceship with matters literary; but if it is the technique and the verbal tools, read the table of contents forwards!

American Civics. A Text Book for Schools and Academies. By A. G. Fradenburgh, Ph. D. Cloth. $1.00, postpaid. Octavo. Hinds & Noble.

The author's reputation as a specialist in this particular field, his experience in teaching this subject to teachers, and his knowledge of the special needs of the schools through the dual acquaintanceship with the educational system and with the teaching body—all these qualifications stand back of this new work and should elicit the interest, while appealing to the loyal spirit of American teachers.

A satisfactory textbook for the study of American civics must contain the essentials of American political institutions, national, state and local, set forth in a clear, incisive style. Not only must it explain the evolution and the nature of these institutions, but it must explain their life. It should present an adequate treatment of the actual workings of party organizations and party methods, the machine and the boss. Fradenburgh's American Civics meets these requirements.

The writer, being an acknowledged specialist, the book is based upon his original investigations. It is scholarly. And it is teachable—the highest praise of the book comes from teachers who have put it to the test of actual class use in the hands of their pupils. Teachers and students alike find that it makes civics interesting to the point of fascination. The book is inspiring.

It is adequate. It fully meets the demands of the leading State departments of education, as also of students generally; and it covers the entrance requirements of all colleges. In method, in manner and in scope the book should, on merit, win the approval of American teachers.

McMaster's Brief History of the United States. By John Bach McMaster, Professor of American History in the University of

Pennsylvania. Half leather, 8vo, 464 pages, with maps and illustrations. Price, $1.00. American Book Company, New York, Cincinnati and Chicago.

This is a new book by the leading authority on United States History. The narrative is attractive and interesting, and provides a well-proportioned account of the chief events and figures. The book contains a summary at the end of each chapter, and references to collateral reading. Numerous footnotes include the biographies of prominent characters, and accounts of the less important events. The volume gives adequate attention to the colonial period, as well as to the social and industrial development of the country. It is noteworthy for the freshness and vigor of the style, its authoritative statements, and its historical and impartial treatment of every phase of our country's history. The numerous pictures are of a striking character and rare educative value. The maps are clear and well executed.

Carpenter's Industrial Reader—Foods. By Frank G. Carpenter, author of Carpenter's Geographical Readers. Cloth, 12 mo., 362 pages, with illustrations. Price, 60 cents. American Book Company, New York, Cincinnati and Chicago.

This is the first of a new series of supplementary readers, written by the author of the phenomenally successful Geographical Readers. The book will give children a knowledge of the production and preparation of foods, and show how civilization and commerce grew from man's need of foods and the exchange of foods between the various nations. The author takes the children on personally conducted tours to the great food centers of the world, to the markets of exchange, to the factories, the farms, the forests and the seas. Together they visit the wheat fields, the flour mills, the cattle ranches and the packing houses. They learn to understand the manufacture of dairy products, and go to the fisheries, to the orchards and vineyards, and to the tea, coffee, rice and sugar plantations. The volume is as interesting as any story book, and is profusely and attractively illustrated from photographs.

Plato's Apology and Crito. Edited by Isaac Flagg, Ph. D., Associate Professor of Greek, University of California. Cloth, 12mo.,

205 pages, with introduction and notes. Price, $1.40. American Book Company, New York, Cincinnati and Chicago.

This edition presents a carefully constituted text, with explanatory notes at the foot of the page, preceded by an introduction, and followed by an index supplementary to the notes. The substance of the introduction is a brief exposition of the Socratic method and character as revealed by the chief Platonic dialogues, and finally idealised in the Apology. The notes are intended mainly to furnish the reader with a guide to the connection of thought or argument and the author's tone of feeling for the time being, and with brief grammatical or rhetorical elucidation of the more difficult passages. A synopsis of the contents of each paragraph is also given. But matters purely linguistic or historical that require notice have been relegated, for the most part, to the index. The index has also been made to comprise a number of familiar Greek words which have given rise to idioms or of themselves demand close and repeated observation on the learner's part.

"A Short History of Rome." By Frank Frost Abbott. Chicago: Scott, Foresman & Co. $1.00.

The important facts of Roman history and their connection with one another are given in such form in this text-book as will enable teachers to cover the entire period to the reign of Charlemaign in the time commonly given to this branch of history. This introductory manual is concrete, and the unity of the story is preserved in such a manner that the logical sequence of facts is apparent; it being the aim of the author to give the student some idea of the real meaning of history and at the same time relieving him from the painful task of memorizing a series of loosely connected incidents.

Maps in black and white are given to show the scenes of the important wars, and colored maps are given to illustrate the growth of the Empire. The illustrations are new and interesting.

Issued simultaneously with this text is a small Handbook which contains hints, questions and other helps for teachers, and costs 25 cents. HULSE.

"The Welding." By Miss Lafayette McLaws. A novel of the Civil War. 360 pages. Little, Brown & Co., Boston, Mass. Price, $1.50.

Written by a Southerner and the daughter of a Confederate general, "The Welding" gives graphic descriptions of the life of the South preceding and during the Civil War. While the author shows a large grasp of political conditions and has interwoven into them an interesting romance, she has, on the other hand, written not as a Southerner on the slave question, and has put into her book some gruesome incidents equalled only by certain ones in "Uncle Tom's Cabin."

The pictures given of the country itself, and of the rugged, shrewd country people with their homely wit, as well as of the aristocracy and their hospitality and courtesy, one feels to be true to life; and on the whole "The Welding" is a strong novel.

HULSE.

The Making of a Teacher. By Martin G. Brumbaugh, Ph. D., LL. D., Professor of Pedagogy in the University of Pennsylvania. Philadelphia: Sunday School Times Co. $1.00.

Sunday School superintendents and teachers who wish to be up-to-date in their methods will welcome with pleasure this text-book which has been prepared especially for their use, and which gives in essence the principles of psychology and pedagogy that should be mastered by every person who hopes to teach children effectively. These principles Professor Brumbaugh has stated in a manner so clear, so logical and so interesting that the attention of the reader is easily held and a knowledge of these fundamentals is acquired without great effort, although the work is thoroughly scientific.

In preparing this text-book, the author had in mind the mass of Sunday School teachers, desiring to place in their hands a work that they could enjoy and benefit from without a preliminary course in the science. From his refreshing application of these principles to Sunday School work, however, any teacher can gain suggestions which may be of help in his work.

This work is designed for use in teachers' training classes, and is arranged with questions at the end of each chapter to aid in its study and use in class. HULSE.

New First Latin Reader. By John Henderson and R. A. Little. Toronto: The Copp, Clark Company, Limited, 1906. Pp. IV—|—230.

The aim of this Latin Reader is to prepare students directly for the Latin examinations at the University of Toronto. Singularly, the University of Toronto requirement calls for only Caesar, Gallic War IV 20-38, V 1-23 and Virgil's Aeneid II 1-505, with some exercises in Latin prose composition. Accordingly, those selections, with thirty-nine exercises in Latin prose composition, and with the addition of some thirty-seven pages of selections from various parts of Caesar's Gallic War for sight reading, make up the material of the book.

The introductions contain (1) a good sketch of Caesar's life and work and a discussion of the Roman army, and (2) a careful, brief account of Virgil and his life and work.

The text is comparatively free from faults. But the editor has adopted what seems to us the very unhappy plan of putting at the foot of each page of Caesar text a vocabulary for that page.

The notes, prepared by a few suggestions on Latin style and English translation, are sane and helpful.

The treatment of Virgil's metres is far behind the times and the weakest part of the book. In many ways, this part of the book is misleading. E. G., p. 142: *A vowel* before two consonants is long by position." The discussion of *"scansion"* (p. 143, e. g.), with apparent directions for "cutting off" one syllable from the other syllables of a word, would naturally lead to a disjointed method of reading Latin verses more jolting than the most primitive corduroy road and utterly ruinous to Virgil's smooth and mellifluons Lexameters. Again (p. 140): "the last syllable is elided" is grossly inaccurate in statement. And for the leading example of *Synaeresis,* the authors give *Rhipeus.* (p. 145).

Mistakes are not infrequent, e. g., p. 5: "Caesar left Rome with five legions and by rapid marches soon overtook and defeated them at Bibracte." The editors would have difficulty in citing the passage in which "Homer says that during the siege the Greeks lived in wooden huts thatched with grass." (p. 188.) Again: "The Dorians were one of the leading tribes in the war at Troy." (p. 188.) On the contrary, this is one of Virgil's many anachronisms; Homer never mentions *Dorians*—and for the very good reason that there were no Dorians at Troy; the Dorian invasion came later.

In their remarks upon matters of art, the editors are no more careful. On p. 202 they say: "According to the sculptor (of the Laocoon group) the serpents are twined about and kill the father and the sons simultaneously." Far from it! The younger son is

already dead (the uplifted arm is restored and wrongly restored); the father is struck by the deadly fangs and is even now in the agony of death; the older boy has a fair chance to escape unscathed, and according to one tradition he did escape unhurt. Again, p. 188: *"Parthenos, "a maiden;"* hence her temple at Athens was called Parthenon." But the name Parthenon was not applied originally to the temple proper, but to the treasury of the opisthodome and had nothing to do with the maidenhood of the goddess.

The English style is, on the whole, refreshing. The only serious blemish is found in the mild confusion of historical presents and preterits in the introduction to the selection from the Aeneid. We will quote but two out of dozens of each sentences: "While the games *were* in progress, some of the Trojan women *fire* the ships." "Calchas *named* Sinon as the doomed one, and all *acquiesce.*"

The vowel quantities are not marked in the text; but in the vocabulary the long vowels are indicated—not, however, with such accuracy as might be wished; *Sponsa,* nosco and its compounds, vowels before *ns* and *nf* have nothing to suggest that the vowels are long; hidden quantities, indeed, are not in any wise recognized.

The book is nicely illustrated. The Map of Gaul at the beginning would be much more attractive and helpful, if it were colored. The high school boy who consults this map may find the "Helveti i" or the "Boii" or the "Allobroges;" but the map will not even suggest where their boundaries begin or end. In this day of cheap lithography, a map like this seems almost unpardonable.

The composition and press-work are excellent. Misprints are rare. Most of them are found in Greek words, as on pp. 189, 204, 235. *Thompson* (p. 139) and *Crutwell* (p. 140) may not be misprints.

The book has many points of excellence, but with its specific planning to meet requirements so different from those of our schools, it is not adapted to extensive use in the United States.

WALTER MILLER.

A Handbook of Literary Criticism. By William Henry Sheran. Price, $2.00. Hinds, Noble & Eldridge. Publishers, New York City.

Literature considered from the viewpoint of a fine art. This is the position which the author of this new work takes with regard to his subject. He holds that, in common with all the fine

arts, literature has its own province, its own form and content, and that the art—form and art—content should be ascertained before the student makes any detailed study of the various departments in which literary art finds expression. The opening chapters of the book, therefore, are devoted to such an analysis. The relation of literature to the other fine arts, sublimity, beauty, feeling, wit and humor, melody, and personality in literary art; all these are treated with a skillful touch and in such a clear and concise manner that they cannot fail to appeal to even the casual reader. For this little volume is not a collection of the dry bones of literature, it is not a pedantic treatise on certain men who have written certain books and then died, only to be followed by other men who have written other books and in their turn have passed away, but it is a mountain-top survey of the world of letters that is delightfully comprehensive and complete in all its details. Under the heading, "Prose-Forms," the author has considered The Letter, The Essay, Biography, History, The Oration, Fiction and The Novel; while under the caption, "Poetic Forms," he discusses Poetry, The Drama, its characters and ethics, The Epic and The Lyric poem. An excellently arranged Appendix and Bibliography rounds out the work. A valuable feature of the book is the insertion which Professor Sheran has made, of the estimate which one writer has given in his works of some other man of letters, as for instance the criticism of Edmund Burke written by John Morley, Rufus Choate's opinion on Daniel Webster, Lowell's article on Carlyle, and as a matter of course, extracts from Boswell's Life of Dr. Johnson.

NEWCOMB.

How to Study Literature. A Guide to the Intensive Study of Literary Masterpieces. By Benjamin A. Headrick, A. B. (Harvard), Professor of English, High School of Commerce, New York City. Price, 75 cents. Hinds, Noble & Eldridge, Publishers, New York City.

A fourth edition of this helpful book, revised and enlarged, has just emerged from the press. To those who are not familiar with this interesting manual it may be said, that it is not a large and comprehensive work covering the whole field of literary effort through all the ages, but on the contrary it is a little volume which aims merely to facilitate the systematic, careful and appreciative study of literature as literature. Its purpose is to concentrate

attention upon the text itself, not upon editorial explanation or comment. It does not deal with philology, grammar and manners and customs of the time. It rather furnishes means by which the student may ascertain for himself, from an actual study of the text, the chief characteristics of the book studied. It acquaints him with the fundamental principles of literary construction, and asks him to decide for himself how far those principles have been observed. Not to present ready-made opinions for his acceptance, but to teach him to see for himself and to judge for himself is the aim throughout. Outlines are given for the study of six literary types; in Poetry, the Epic, Lyric and Drama; in Prose, Fiction, the Essay and the Oration. Each book is treated as a type, a representative of a class, so that the study of a few books may open the way for the appreciation of the many. The appendix contains a list of books for recommended reading which cannot but prove of value to the student. NEWCOMB.

Victor Hugo's Intellectual Autobiography. Translated with a study of the last phase of Hugo's genius by Lorenzo O'Rourke. Price, $1.20. Published by Funk & Wagnalls Company, New York and London.

When Victor Hugo died he left with his heirs a bulky copy-book bearing the title, "A Postscript to My Life." Reserved by these heirs as the chief memorial of the recent Victor Hugo Centenary, the book attracted great attention in Europe, where it was regarded as the most authoritative commentary which had yet appeared upon the personality of France's greatest poet. As indicated by the title, the book has a personal character and is, indeed, a species of memoirs of Victor Hugo's intellectual life, revealing hitherto unknown sides of his genius and throwing new light upon his literary processes. The first half of the volume is devoted to art and literature. Some of the chapter headings are "Genius and Taste," "The Utility of the Beautiful," "Great Men, Shakespeare, La Fontaine, Voltaire, Beaumarchis." The second half gives the author's matured and definite convictions upon those subjects of his life-long meditations—God, the soul, destiny, science, religion. While in the last pages of the book are smaller chips from the workshop of the great master, detached thoughts on all sorts of subjects: history, politics, morality, the sentiments, love, woman, etc. The introduction by Lorenzo O'Rourke is a charming piece of work and will be read with delight by every admirer of Victor Hugo, the great

Olympian of French letters. This book constitutes a valuable commentary upon the work of Hugo as a whole. Closing the cycle of his immense literary achievement, which seems almost to span a century, it will bear comparison with his great prose. The frontispiece is an excellent reproduction of Auguste Rodin's famous statue of Victor Hugo in Exile. NEWCOMB.

How to Speak in Public. By Grenville Kleiser, former Instructor in Elocution in Yale Divinity School, now in the Jewish Theological Seminary of America. Price, $1.25. Funk & Wagnalls, New York and London.

This excellent work on elocution and public speaking is devised rather as a self-instructor for home-study than as a text for use in the class-room, but the clear and concise way in which the subject matter is set forth should make it a valuable work in either case. It is divided into four parts: Part One—Mechanics of Elocution, Part Two—Mental Aspects, Part Three—Public Speaking, Part Four—Selections for Practice. The first part embraces chapters on Breathing, Voice Culture, Gesture, etc. The second treats of Pause, Emphasis, Inflection, Picturing, Concentration, etc. The division devoted to Public Speaking discusses Health, Appearance of the Speaker, Memory, Rhetoric, Imagination and kindred topics. The Divisions of the Speech, its Discussion and Conclusion and the Delivery. The portion of the book given over to selections for practice, contains about seventy well-chosen recitations covering every phase of feeling. School teachers, lawyers, ministers, salesmen, in fact, all who aspire to be public speakers, will find this book a valuable aid to the attainment of grace, ease and force in speaking. A small pamphlet entitled, "Some Courses," accompanies the book, and in it will be found outlines for both elementary and advanced courses in elocution and oratory, arranged in regular and logical order. NEWCOMB.

The Agricultural College and the Farm Youth. By L. H. Bailey, Director of the College of Agriculture, Cornell University.

The relation of the Agricultural College to farming as an occupation for educated men is a problem of considerable interest to-day and is sufficiently important to investigate since the Agricultural College is making such rapid advance in the field of education. The authority of an investigator is here recognized.

Professor Bailey, as Director of the College of Agriculture, Cornell University, has studied the problem concerning the Agricultural College and its influence, favorable or adverse, in developing a true inclination toward the farm, as a life-work. Following are some interesting and instructive data gleaned from his investigations as discussed in his article, "The Agricultural College and the Farm Youth." The college is so often accused of unpractical training. It is held that a college graduate, especially one who was reared on the farm, has no sympathy whatever for farm work; more than that, so unpractical has his education been, that even if he would, he could not engage in agricultural work to advantage. That either idea is erroneous and contradicted by facts, becomes evident when the present status of the Agricultural College is considered.

In this country agricultural education is only about half a century old. Since the "Land Grant Act of 1862, in which every State and Territory has founded a college that teaches agriculture," the States are appropriating large sums for its equipment and colleges in general are introducing the scenes and arts into their curricula. "Fully thirty States, Territories and Provinces in North America have taken some kind of official action looking toward the introduction of agricultural subjects into the common schools."

But that both State and college are not laboring under misrepresentations, must become evident from Professor Bailey's investigations. To learn directly whether or not the Agricultural College is so training men and women as to foster in them a sympathy for, and an inclination towards farm work, Professor Bailey personally interviewed a number of students from the Agricultural College at Cornell University, with reference to their inclinations concerning their life-work. The replies indicate the students' ideals which normally unfold with college training. Altogether about 179 replies were obtained from students representing three classes. First, those who were pursuing the regular four years' course for a baccalaureate degree; second, those following agricultural studies; third, those taking a teachers' course in nature-study and agriculture. Of 78 farm youths, 68 wished to go into farming, 8 desired "to teach or experiment in agriculture;" of 69 city or town students, 44 wanted to farm, 14 "to teach or experiment in agriculture," 8 to pursue "landscape gardening;" of 14 "American women students," 2 wished to go into farming and 12 to "teach nature study and agriculture;" of 18 foreign students, 15 desire to farm and 3 "to teach or experiment in agriculture." Farm students and their

intentions—13 wanted to return to the home farm; 14 to follow stock and dairy farming; 11 horticulture; 6 general farming; 6 poultry and 5 superintendent or manager of a farm. Town students and their intentions—15 will follow horticulture; 14 stock and dairy farming; 8 general farming and 4 poultry. In all 60 per cent wish to make practical farming their life work. Statistics from other sources tend to coincide with these data. Regardless of the broad opportunities offered by our growing cities and the constant call for men by agricultural colleges and experiment stations, a very large proportion of agricultural college graduates are pursuing farm work.

The Agricultural College is successful in leading men to the farm because it recognizes the force of early training and as a consequence, is persuading the common schools to introduce the elementary sciences and arts into their work. In this way is there cultivated in the pupil, a sympathy for nature and her creatures. These sciences and arts continued more elaborately at college, together with the mathematics and the classics, develop not only mental breadth, but those more tangible accoutrements which make the ready man. The college graduate of to-day only continues that, which from early childhood in the common schools and through his college course, he has acquired an aptitude for. He leaves college well prepared for the exigencies of life.

Of course there will naturally be some exceptions. So long as there is individual variation, some men, in spite of their technical training will incline towards books, others towards the professions. This is a healthy state of affairs. Otherwise suspicion would arise. The Agricultural College would be suspected of so narrow a training as to incapacitate its graduates for anything but agriculture. Such is not the case. The curriculum of the Agricultural College is not technically narrow, rather is it broadening and humanizing. The so-called College of Liberal Arts, offering scientific subjects leading to agricultural studies, is convincing proof. As a result, farming is no longer the occupation of the ignoramus. The Agricultural College (and the College of Liberal Arts), has put it on a higher level, has made of it a science. Moreover, the college-bred youth need not fear the stagnation of an old-fashioned farm routine; he can return to the farm confident that any innovations he may see fit to introduce will meet with approval following inevitable success.

The successful farmer of to-day, and the near future, must be the educated, college-trained farmer. His work is in demand—as

witness the daily development of the agricultural and experiment stations—farming is now a science and the Agricultural College the open *sesame* to the farmer. SHUTAN.

Literature and Life in School. By J. Rose Colby, Ph. D., University of Chicago Press.

This is a book about English. It seeks to be frankly and simply what its name declares—a book about literature and life in school. Since, in spite of all that has been said and done to foster the introduction of literature into secondary schools, it still is hardly more than a beggar at the doors of a great proportion of our elementary schools, it has seemed once more worth while to make a plea for its presence in school life from the first date to the last. As is true of any rational plea for the use of any subject in school, this plea is based on a consideration of the essential business of the school, of the essential need of children, of the real nature of the subject, and of its true, its proper work, consequent thereupon. The book further undertakes to suggest means that may be employed to secure to literature some measure of fulfillment of its proper function in the life of children. This includes a study both of the general character of the material to be used and of the method of handling the material. It does not undertake to lay down a set course, nor to suggest special devices for class work. Finally the book ventures a look ahead into high school and college and the life that lies beyond and outside of the classroom, to see how the subject fares and should fare there, and to find justification in life itself for the nature of the plea it makes for the handling of literature in school. Contents: (X) Preface, (I) The True Function of Literature, (II) Literature and the First Four Years of School Life, (III) Literature and the Second Four Years of School Life, (IV) Method of Handling Literature in School, (V) Literature and Life After the Elementary Years, Appendix, Index.

The following lists are intended to make more specific the recommendations as to class and outside reading made in Chapters II, III and V. They include also some additional names and an occasional comment. These lists are inserted here to be easy of reference to those who may find them of convenience, and to be out of the way of such readers of the book as may prefer to make their own selections.

It will be seen that, not merely for the first four years, but

throughout, the lists include matter for outside reading not easily accessible to many pupils, and, because of the expense involved, wholly beyond the command of many schools, for general class use. I have, nevertheless, inserted them deliberately. Some of them teachers will have in their own libraries. Some of them may be found in public libraries, even in villages. And if school boards can be educated to see the needs of schools in their charge, they can be induced to put a bookcase in every schoolhouse, and gradually to put on its shelves a large part of the material suggested in these lists. It is with this in mind that the poems so freely recommended from less commonly accessible poets have been in the main restricted to such as are included in some half dozen anthologies of moderate cost for general readers or are published in very inexpensive form especially for schools.

Poems and Tales for the First Four Years, English Poetry, American Poetry.

For the Second Four Years, English and American Prose, English Poetry, American Poetry.

For the High School, English Poetry, English Prose, American Poetry, American Prose.

Leading Magazine Articles of the Month.

COSMOPOLITAN MAGAZINE.

OCTOBER—The Long Arm of Mannister, Oppenheim; The World-Menace of Japan, Smith; Miss Gould's School Days, Ross; The March of Kelly's Army, London; The Twins, Robertson.

SCHOOL SCIENCE AND MATHEMATICS.

OCTOBER—The Position of Atomic Theory, Evans; Chemistry Symposium, Perkins; Modeling Wax in Physiology and Zoology, Witham; The Educational Value in the Study of Animal Life, Froth; Opportunities Due the Secondary School Teacher of Physics, Collar; Secondary School Geography: What Shall It Be? Whitbeck; High School Algebra, Loomis.

NOVEMBER—The Articulation of Science Teaching in the High School With That in the Grades, Douglass; Mathematics as a Factor in Character Building, Condit; Chemistry Symposium, Doane and Irwin; Progress and Value of Tree Planting; Preliminary Report of the Committee of the Central Association on Algebra in the Secondary Schools.

THE BUSINESS WORLD.

NOVEMBER—A Business Short Cut; Personality in Salesmanship.

POPULAR ASTRONOMY.

OCTOBER—On the Distortions of Photographic Films on Glass, Albrecht; Two Methods of Reducing Polaris Vertical Circle Observations for Time with the Engineer's Transit, James; On a Method of Computing, Rust; The Transit of Mercury, Rigge; The Rills on the Moon, Fauth.

NOVEMBER—The Mill's Expedition from Lick Observatory, Payne; A Graphic Method for Lunar Eclipses, Laves; The Planet Mars, Payne; The Age of the Earth's Consolidation, See; Geometrical Considerations Applied to the Velocity of Comets, Wood; Spectrographic Observations of Venus for Solar Parallax, Burns.

NEW ENGLAND MAGAZINE.

OCTOBER—Rhode Island: the State on the Up-Grade, Putnam; The Culture-Value of Modern Languages, Hall; Farming as I see It, Sanborn; How Roosevelt Will Clean Out Washington, Barry.

NOVEMBER—Connecticut, the State Ruled by Its Uninhabited Country Towns, Putnam; The Great Maine Conspiracy, Barker; The Presidential Nomination and Its Wooers, Barry; Views of Old-Time Philadelphia, Bartlett and Willis.

THE NATIONAL GEOGRAPHIC MAGAZINE.

NOVEMBER—Queer Methods of Travel in Curious Corners of the World, Austin; Planting Fishes in the Ocean, Bowers; Hunting Big Game in Portuguese East Africa; A Visit to Lonely Iceland, Noyes; The Land of Fire, Stefansson.

THE ANNALS OF THE AMERICAN ACADEMY OF POLITICAL AND SOCIAL SCIENCE.

NOVEMBER—The Church in Its Social Aspect, Judson; The Church and the Working Man, Cochran; Presbyterian Department of Church and Labor, Stelzle; Modern Principles of Foreign Missions, Capen; Social Work of the Catholic Church in America, Kerby; The Christian Settlement, Evans;

The Settlement's Relation to Religion, Simkhovitch; The Social Work of a Suburban Church, Farwell; The Social Work of a Church in a Factory Town, Evans; Social Work and Influence of the Negro Church, Wright; The Church and Philanthropy, Mangold; Efficiency in Religious Work, Allen; The Salvation Army, Carstens.

MODERN LANGUAGE NOTES.

NOVEMBER—The Plays of Paul Hervieu, Davidson; Notes on the Spanish Drama, Buchanan; The Date of Coleridge's *Melancholy*, Belden; The Authorship of *Pericles*, Baker.

AMERICAN CHEMICAL JOURNAL.

OCTOBER—The Action of Dilute Acids Upon Casein When no Soluble Compounds Are Formed, Van Slyke; Researches on Thiocyanates and Isothiocyanates; Diphenylcarbamylthiocyanate, Johnson and Levy; The Coml bustion of Sulphur in Air and Oxygen, Kastle and McHargue; Some Cuprammonium Salts, Horn.

NOVEMBER—Reaction Between Unsaturated Compounds and Organic Magnesium Compounds; Aldehydes and Ketones, Kohler; Behavior of Various Aldehydes, Denis; Researches on Pyrimidines, Johnson and Speh; Certain Salts of Caesium Nitrite, Jamieson; On the Base-Forming Property of Carbon, Norris; Condensation of Phthalanilic Acid, Tingle and Lovelace.

LIPPINCOTT'S MAGAZINE.

OCTOBER—The Whited Sepulchre, Comfort; The Autobiography of Barnum, Moss; Modern Fiction and Modern Life, Holloway; Her College Visit, Blair; Pluck Versus Diplomacy, Dean.

THE CHAUTAUQUAN.

OCTOBER—As Others See Us, Brooks; The Story of American Painting, Spencer; Some Great American Scientists, Schmucker; Charles Hagg—An Immigrant Sculptor of His Kind, Eastman; Greeting to C. L. S. C. Readers, President Hadley of Yale University.

NOVEMBER—American Sensitiveness and Peculiarities; American Painting; Simon Newcomb; Steerage Conditions; Greeting from President Jordan, Leland Stanford.

THE SCHOOL OF MINES QUARTERLY.

JULY, AUGUST and SEPTEMBER—Some Phases of the American Railroad Problem, Fish; Autoxidation of Organic Compounds, Faulk; The Gnomonic Projection from a Graphical Standpoint, Rogers; Mine Surveying, Morrison; On Some Analytical Properties of Pine Wood Oils, Kress; Malleable Cast Iron, Stoughton; Metallurgical Abstracts, Campbell; Abstracts of Recent Mining Decisions, Thompson.

THE NINETEENTH CENTURY.

NOVEMBER—Some Racial Characteristics of Northern India and Bengal, Ali; The Portent of Yarmouth, Russell; The Anglican Church in America, Horwill; An Experiment in Rural Libraries for School and Home, Lord Bishop of Hereford; The Village School, Medd.

THE METAPHYSICAL MAGAZINE.

OCTOBER—The War Against the World's View of Christianity, Herz; The Philosophy of Feeling, Oyston; Evolution from Being, Clark.

NOVEMBER—Animistic Medicine, Wilder; Evolution from Being, Clark; Spiritual Activity and Mental Power, Whipple; The Pursuit of the Ideal, Swayne.

ATLANTIC MONTHLY.

OCTOBER—Rose MacLeod, Brown; The Ideal Minister, Hall; Henry James and His Double, Gill; The Muskrats are Building, Sharp; The Child and the Imaginative Life, McCrady; Gold Output and Higher Cost of Living, Noyes; Externalism in American Universities, Stratton; Sinning by Syndicate, Ross; Italian Industries for Women, Taylor.

NOVEMBER—The Launching of the Magazine, Norton; Recollections of an Atlantic Editorship, Howells; Literature (1857-1907), Higginson; Science (1857-1907), Pritchett; Art (1857-1907), Mabie; Politics (1857-1907), Wilson.

THE TAYLOR-TROTWOOD MAGAZINE.

NOVEMBER—The Sanitary Conquest of the Isthmus, Cawcroft; Historic Highways of the South, Moore; Industrial Education in the South, Jackson; Some Beautiful Women of the South; Joe Jefferson's Louisiana Home, MacLeod; Home-Grown Tea in the South, Fawcett.

HEALTH-CULTURE.

NOVEMBER—Consumption, or Tubercular Phthisis, Latson; Exercise for Young Women, Latson; Physiological Righteousness, Bradford; How to Dress School Children, Rew; Our Daily Bread, Allen; Children's Colds, Langdon.

SCRIBNER'S MAGAZINE.

OCTOBER—Small Country Neighbors, Roosevelt; Chateau and Country Life in France, Waddington; A Great Spanish Artist, Kurtz; The Fruit of the Tree, Wharton; The Fleet; Off the Coast of Virginia, McCoy.

NOVEMBER—The Spanish Galleon and Pieces-of-Eight, Fitzpatrick; Chateau and Country Life in France, Waddington; A Sleepy Little City, Huard; The Fruit of the Tree, Wharton; The Dark of the Moon, Watson; The Call of the West, Lee.

THE WORLD TO-DAY.

OCTOBER—The Late Vineyard War in France, Thompson; In the Outposts of Germany's Advance, Russell; Heroes Who Art Not Soldiers, Claudy; The Philadelphia Gas Works Under Private Operation, Hicks; The Effect of South American Immigration on North American Trade, Freeman.

NOVEMBER—How San Francisco Spent the Relief Fund, Mears; The Modern German Merchant Marine, McVey; The Present Situation in Russia, Harper; The Business Men of the Army, Rockwood; The Hindu in the Northwest, Dodd.

TECHNICAL WORLD MAGAZINE.

OCTOBER—The Mind of the Mechanic, Gnagey; How a Big Balloon is Sent Up, Claudy; Steel Direct from Iron Ore, Dunn; How Wastes and By-Products are Made Valuable, Stewart; Oyster Farmers in Japan, Martin.

NOVEMBER—To Pump Dry a Great Sea, Hall; Twenty Millions for Cut Flowers, Fitz-Gerald; Twin Monsters of the Deep, Quirk; To Use Trackless Trolleys, Beecroft; Machine that Cleans Fish, McClure.

THE LUMBERMAN.

NOVEMBER 15—Arkansas Timber Wealth, and Its Preservation; Reducing Output with Careful Regard to the Interests of Labor; Point Scored in the Northwestern Lumber Rate Litigation; The Fruits of Changing Conditions; Glimpses of the Silver Lining; Causes of Business Failure, and of Business Success; Different Ideas About Different Things; The Utilization of Wood Waste by Distillation, Harper.

THE MAGAZINE OF HISTORY.

OCTOBER—The Ranger Service in the Upper Valley of the Connecticut, Batchellor; Michael Hillegas; The Massacre of the Verendrye Party at Lake of the Woods, Winchell; Blennerhassett and His Island, Todd.

AMERICAN ECONOMIST.

DECEMBER 27—Reorganization of the Senate, Philippine and the House Ways and Means Committee; Tariff Agitation and Financial Depression; Our Account with France.

SOUTHERN EDUCATIONAL REVIEW

EDITED BY

H. ELMER BIERLY

December-January, 1907-1908

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O. K

The following articles have appeared in recent issues of the Southern Educational Review

College and Other Subjects

Industrial Education in a Prairie State, Chancellor E. Benjamin Andrews, University of Nebraska; An Alabama Interpretation of the Work at Tuskegee, President John W. Abercrombie, University of Alabama; Education in a Democracy, Hon. Joseph W. Folk, Governor of Missouri; The New Commissioner of Education, Professor Walter Miller, Tulane University; The Functions and Relations of State Universities, President D. B. Purinton, University of West Virginia; The Achievement of a Generation, President E. A. Alderman, University of Virginia; The Ideals of a University, President L. Hulley, Stetson University, Florida; What Should Be Done by the Colleges and Universities for the Religious Training of Students, Professor Edwin Mims, Trinity College, N. C.; Social Life in College, Professor St. George L. Sioussat, University of the South, Tennessee; The Place of the Agricultural and Mechanical College in the Educational Scheme of the South, President Brown Ayres, University of Tennessee.

School Supervision

Annual Address, Superintendent J. M. Greenwood, Kansas City; Suggestions for the Improvement of the Study Period, Professor F. M. McMurry, Columbia University; School Room Aids and Devices, Superintendent Lawton B. Evans, Augusta, Ga.; The Effect of Moral Education in the Public Schools Upon the Civic Life of the Community, President W. O. Thompson, Ohio State University; The Moral Training of a Child, Hon. N. C. Schaeffer, State Superintendent of Pennsylvania; Some Phases of the Internal Organization of State Normal Schools, President R. N. Roark, East Kentucky State Normal; The Best Means and Methods of Improving Teachers Already in Service, Superintendent W. McKendree Vance, Miamisburg, Ohio; Annual Official Reports of Educational Progress for Each Year, by the Southern State Superintendents; The Introduction of Manual Training in City Schools, Superintendent C. B. Gibson, Columbus, Ga.; The South's Need of Industrial Training in High Schools, Superintendent J. W. Kuykendall, Fort Smith, Ark.; The Fourth Profession, President James E. Ament, State Normal School, Warrensburg, Mo.; Manual Arts in Rural Schools, Professor F. J. Orr, Georgia State Normal; Means Afforded by the Public Schools for Moral and Religious Training, Superintendent T. A. Mott, Richmond, Ind.; Practical Child Study in the Elementary Schools, Miss E. M. Haley, State Normal and Industrial School, Alabama; How to Afford City Children the Advantages of a Country Environment, Superintendent E. H. Mark, Louisville, Ky.; The Course of Study for City Schools, Superintendent R. J. Tighe, Asheville, N. C.; Compulsory Education, President Andrew Sledd, University of the State of Florida; The Training of Teachers in the Local Training School, Superintendent J. H. Phillips, Birmingham, Ala.; The County Superintendent and His Mission, Superintendent J. N. Powers, West Point, Miss.; The County Superintendent in the School Room, Hon. M. Bates Stephens, State Superintendent of Maryland; A Qualified Teaching Force, Professor E. F. Buchner, University of Alabama.

Secondary Education

In What Definite Ways May the State Department of Education Further the Establishment of a System of Public High Schools, Hon. Elmer Ellsworth Brown, U. S. Commissioner of Education; The Relation of the University to the High Schools, President D. F. Houston, University of Texas; The Relation of the Higher Institutions to the Secondary Schools, Professor Joseph S. Stewart, University of Georgia; Shall Agriculture Be Taught in the Secondary Schools of the United States, Dr. S. A. Knapp, U. S. Bureau of Plant Industry, Louisiana; Agricultural Education in Secondary Schools, Professor W. Lochead, MacDonald College, Canada; Agriculture in High Schools, Dr. Dick J. Crosby, U. S. Department of Agriculture; School Boys and an Intellectual Life, President Brown Ayres, University of Tennessee; The Preparation of Students for College, Dean Frederick W. Moore, Vanderbilt University; Entrance Examinations in English, Professor Richard Jones, Vanderbilt University, Tennessee; Aims and Methods of Teaching Civics in Elementary and Secondary Schools, Professor Isidore Loeb, University of Missouri; German and French in Secondary Schools, Professor C. C. Ferrell, University of Mississippi.

SOUTHERN EDUCATIONAL REVIEW

Vol. IV.] DECEMBER-JANUARY, 1907-1908 [Nos. 9 & 10

*RELATION OF THE SOUTHERN EDUCATIONAL ASSOCIATION IN SOLVING EDUCATIONAL PROBLEMS IN THE SOUTH**

Superintendent R. J. TIGHE, Asheville, N. C.

This Association, while sectional in name, does not owe its existence to any narrow view or sectional sentiment regarding the character of the educational work of the South. But the founders of this Association, recognizing that the South has its own peculiar educational problems, saw the necessity for a yearly convention of Southern educators to discuss these problems, to report progress, and to map out new lines of work for future accomplishment. It seems necessary to say this occasionally in order to set some of our friends straight in regard to the position which the Southern Educational Association holds; and I take this opportunity of reiterating the fact that this Association is only sectional in so far as it deals with problems peculiar to this section of the Union.

During the past generation the South has had many and great educational problems to solve, and at times the burden has been a heavy one and the progress apparently slow; but during the past two decades we have been making greater strides than we perhaps realize until we review what has actually been accomplished.

One of the first evidences of the success or failure of educational agencies to strike the popular mind is the number of illit-

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erate persons in the community, State, or section. Taking the literary tables as computed by the United States Census Department, for persons ten years of age and over, we find that during the twenty years from 1880 to 1900 there were very material gains in the decrease of illiteracy in all of the Southern States. Maryland had a decrease of 8.2 per cent, Virginia 17.7 per cent, North Carolina 19.6 per cent, South Carolina 19.5 per cent, Georgia 19.4 per cent, Florida 21.5 per cent, Kentucky 13.4 per cent, Tennessee 18 per cent, Alabama 16.9 per cent, Mississippi 17.5 per cent, Louisiana 10.6 per cent, Texas 15.2 per cent, and Arkansas 17.6 per cent.

But we must not lose sight of the fact that we still have a great mass of illiteracy to remove in the South. When we consider that in 1900 Maryland still had 11 per cent of her citizenship who could not read and write, Virginia 22.9 per cent, North Carolina 28.9 per cent, South Carolina 35.5 per cent, Georgia 30.5 per cent, Florida 21.9 per cent, Kentucky 16.5 per cent, Tennessee 20.7 per cent, Alabama 34 per cent, Mississippi 32 per cent, Louisiana 38.5 per cent, Texas 14.5 per cent, and Arkansas 20.4 per cent, it behooves us as teachers and citizens to strain every nerve and to lose no opportunity in helping to remove this dead load from off the backs of the citizenship of this section.

In this connection it is proper to consider the popular demand for education as exhibited in the growth of school funds and in the character of the attendance given by persons of school age. A comparison of the total expenditures for public education twenty years ago with that at the present time shows that whereas the school funds in the thirteen Southern States in 1886 amounted to $11,500,000, in 1906 they netted over $32,000,000, or nearly three times what they were twenty years ago. This is a very substantial increase, and $32,000,000 is a very large sum of money; yet when we think that one of our large cities in this country spends more than this sum on its 1,000,000 school population, we are put to wondering whether we are doing what we ought to do for the 8,000,000 persons of school age in the South.

By reference to the reports of the United States Commissioner

of Education we find that the enrollment of the thirteen Southern States twenty years ago was about 3,000,000, while that of 1905 was upwards of 5,000,000. Again we have a very encouraging gain in attendance of about 2,000,000. But while we had 5,000,000 school children on our roll books during the session of 1904-05, the same records show that we had but about 3,000,000 in average daily attendance, or about sixty per cent of those enrolled attending every day our schools were in session. Here we have an average daily loss in attendance of forty per cent of the number enrolled, and who can estimate the loss in scholarship caused by such irregular attendance? And when we consider in this connection also our short school terms in the rural districts, we are constrained to feel that the people of the South are not yet as fully impressed with the importance of education as they should be. This phase of our educational problem does not wholly depend upon the question of more funds. And it is none the less discouraging when we find that, in some of the States at least, a majority of the illiterates are between the ages of ten and twenty-one years.

That much of this irregularity is due to indifference, and in many cases to greed on the part of parents who put their children to work while they are yet of tender age, we are all aware. And what is the remedy? I believe that thirty-six States of the Union and all of the leading countries of Europe have found that there is but one safeguard for the child under such conditions, and that is compulsory attendance. The idea of compulsion is and always has been repugnant to the American, and especially to the Southern man, but I verily believe that we shall never be able to shift from our shoulders this great burden of illiteracy until we see that every child has a "square deal" in the chance for an education. It is not my purpose to dwell longer on this subject, for it appears on the program to-morrow as a separate topic and will, I am sure, be adequately dealt with at that time, for the gentleman who is to discuss it is a man of wide experience and great wisdom in matters of education; but I cannot refrain at this time from urging you, my fellow-teachers, to lend your assistance in the cause of the rights of childhood against illiteracy, ignorance and child labor. With the exception of

Kentucky, compulsory attendance laws did not prevail in the South until last year, when the North Carolina Legislature passed a measure leaving the matter optional with communities whether they should compel attendance. South Carolina has been agitating it for several years, and now I learn that Virginia and other States are considering the adoption of mild attendance laws.

Another item of interest to this Association, and of value in considering the educational problems of the South is the number of teachers employed, the proportion of men and women teachers, the character of their training, and the salaries received for their services. In 1885 I find that the Southern States mentioned heretofore employed 66,000 teachers, of whom 27,000 were women and 39,000 were men, whereas in 1905 there were 109,000 employed, and of these 70,000 were women and 39,000 were men. From this statement it would appear on its face that men have not grown in popular favor as teachers, since we have practically the same number we had twenty years ago, while the number of women employed has nearly doubled. In 1885 every State in the South with the exception of Maryland and Louisiana had more male than female teachers, whereas in 1905 every one of the Southern States excepting only Arkansas had an excess of women teachers, and in several States they were as two to one, three to one, and four to one. Now while all this, from a statistical point of view, seems to discount the male teacher, the true reason for the great increase in women teachers is probably that men find more lucrative positions outside of the profession and that many who do take up the work remain only for such time as they can properly prepare themselves (financially) for a course in law, medicine or theology. It should be stated, however, that the statistics here given do not take into consideration private or parochial educational enterprises, because the statistics on these institutions twenty years ago were anything but complete in the United States reports. I regret this because I should have been glad to present this side of our educational agencies.

As regards the training of teachers and their fitness for the calling, I find that in 1885 we had in the South fifty-two public

and private institutions purporting to give normal instruction for teachers. This was practically one-half of all the normal schools in the United States. There does not seem to have been any of our colleges giving pedagogical training in those days, at least none are reported. Twenty years later we have 396 institutions, including normal schools, public and private; high school training classes, public and private; and universities and colleges, that give instruction and training for the teaching profession. In other words, there are nearly eight times as many institutions in the South offering training for teachers as there were twenty years ago. But the gain in the number of persons taking training does not show the same ratio, for while we had 6,700 in training in 1885, we had but 21,000 in 1905, or three times as many. Now if all of these 21,000 persons taking teachers' training actually went into the work we should have about one-fifth of our whole teaching force (109,000) available annually; and if we produced teachers at this ratio for five years we should then have a complete force of trained teachers in our schools; but we are all well aware that neither of these things occur; for many of those trained for the work never enter the ranks and many more of those who do so remain but a year or two: so that, for years to come we must be content to draw teachers from the ranks of the unskilled — from untrained college students, high school graduates, and, in the rural districts, even from the ranks of those having only an elementary education. It is to be regretted that by far too many of our rural teachers are drawn from this latter class. And for this reason, if for none other, we should welcome the advent of the popular movement in most of the Southern States to-day for the establishment of rural high schools. The rural high school can be of untold benefit to the cause of general education in the South by supplying a class of better educated teachers than we have at present; and I feel that, coupled with the increase and improvement of normal schools and normal training, it is the keynote to better educational conditions so far as the teaching force is concerned.

Evidently the subject of salaries for teachers did not receive much attention twenty years ago, for I find very incomplete re-

ports or none at all from the Southern States. Alabama paid an average salary, for both sexes, of $112.79 a year, Maryland $351.26, South Carolina $85.24 for men and $88.55 for women, Virginia $182.15 for men and $157.11 for women. It should be noted that South Carolina paid her women teachers $3.31 per year more than she did her men teachers. I regret that the statistics are not more complete, but I presume that the States given, with the exception of Maryland, are typical for the South in 1885. Maryland seems to have enjoyed a long school term and fairly good salaries for several years previous to this date, and she now has a minimum salary of $300 per year for all teachers. On investigation I found that the average salaries paid per year in 1905 were approximately as follows: Maryland $450, Virginia $186, West Virginia $212, North Carolina $145, South Carolina $157, Georgia $200, Florida $208, Kentucky $200, Tennessee $206, Alabama $147, Mississippi $191, Louisiana $260, Texas $295, Arkansas $176. It is possible that there are some discrepancies in these amounts, but if there are I shall be glad to have the State Superintendents correct me when they make their reports to-morrow. My authority is the United States reports for 1905, and these amounts have probably been increased in most instances in the last two years.

I call your attention to the fact that the only State of those mentioned having a larger annual salary than that for the whole country ($360) was the State of Maryland, which is quoted at about $450 per year. All honor to Maryland!

Of course the salaries given are considerably in advance of what they were twenty years ago and they are yearly advancing, but what inducement is there to men and women of education and ambition to go into the work in States where the salaries average from $150 to $200 a year? Why the unskilled laborer who digs and carries cannot be had for such wages! Authorities tell us that living expenses have advanced forty-six per cent in the past ten years. What kind of service can reasonable men expect from teachers who are paid such starvation wages! Is the training of children of such small importance that we can afford to make it the most poorly paid service in the South to-day? Can we not do something more than we are doing to get

the parents of the land to realize that the cultivation of the minds of their children is of vastly more importance than the cultivation of cotton, or the making of better roads, or the storing of wealth? Can we not get them to realize more fully that, as Walter Page has well said:

"It is a shining day in any man's growth when he comes to see and to feel and to know and to freely admit that it is just as important to the world that the ragamuffin child of his worthless neighbor should be trained as it is that his own child should be. Until a man sees this, he cannot be a worthy democrat, nor get a patriotic conception of education; for no man has known the deep meaning of democracy, or felt either its obligation or its life till he has seen this truth clearly."

These problems of school attendance, illiteracy, school finances, the better training of teachers, better salaries, etc., need to be brought home to the hearts of the people in every community in the South just as they are being brought before the people in other sections of the country. New England and the Middle Atlantic States have their public education associations to carry the needs of the child into every home and to educate the parents along the lines of their duty to their offspring. These organizations are not composed of teachers alone, but they enlist the assistance and sympathies of the people in all walks of life who are interested in the betterment of the future citizenship of the country. Similar associations are at work in some localities of most of the Southern States. Three years ago the Coöperative Education Commission, comprised of men and women from all parts of the States interested in education, was organized in Richmond, Virginia. Through the assistance of the five State Inspectors of Education, local associations were established numbering two hundred and fifty in two years, and the parent association is looking forward to the day "when there will be no village too small, no community too indifferent to have in its midst an agency so potent for good as a healthy, vigorous education association." We had hoped to have a report at this meeting from the Secretary of the Coöperative Education Commission on the work that is being accomplished by it in Virginia, and I greatly regret her inability to attend. I am

sorry also to report that President Susie V. Powell of the Mississippi School Improvement Association, who was on the program of the Southern Drawing Teachers' Association, is unable to be present owing to illness and prostration due to the accidental death of her brother. In other States we have the Federation of Women's Clubs and women's betterment associations, but as yet their numbers are all too few. I think it would be an excellent thing for this Association to make a special feature of the work done in each State by such agencies; for I feel that they can be made a great means to-day in popularizing educational movements and in helping to solve many of the problems before us in the South.

Of course, in dealing with the educational problems of the South we cannot leave out the negro, for him we have always with us. By comparison of the United States Commissioner's report for 1905 with that of twenty years previous I find that the sixteen former slave States have practically the same percentage of enrollment in the public schools, namely, fifty-five per cent of the total colored youth of school age. But a comparison of statistics for average daily attendance shows a slight decrease, in the seven States quoted, in 1885, with the exception of Virginia, which has an increase of four per cent. I think, however, that there has been an increase in the number of private and parochial schools for negroes in the past twenty years, but as the reports for the elementary classes for these are not complete in either of the United States reports it is difficult to say whether there has been an increase or a decrease in the desire of the race for knowledge of the elementary branches. We do know, however, that the character of negro education has taken a more practical trend in the last two decades. Conspicuous in this movement have been the schools of Hampton, Tuskegee, Calhoun, Hanover, Va., Helena, S. C., and Fort Valley, Ga. The people of the South realize that the proper education of the colored race is their problem, and with this end in view the schools of the negroes are getting their share of the growth of educational progress in better schools, better trained teachers and better supervision.

In his last report the United States Commissioner of Educa-

tion says that since 1870 the former slave States have expended $818,000,000 on public education, of which at least $149,000,000 went to the support of the common schools for the colored race, or about eighteen per cent. In 1905, of the $46,000,000 spent in these States, the negro received about twenty per cent. Here is something of a gain in the financial support for negro schools.

I believe our Northern friends are coming more and more to realize that the Southern white man and the Southern negro must together solve the problem of negro education. This sentiment is becoming quite common in the Northern press, and as Dr. Dickerman in the last field report of the Southern Education Board says:

"For the Northern people to regard this people in one way, and for the Southern people to regard them in another way, wholly at variance, is incompatible with the correct view on the part of either the North or the South, and it puts the negroes themselves in a very bad position for fulfilling their rightful service to themselves and the Nation. Sectional division of sentiment must give place to a national unanimity of sentiment; and this unanimity must be so just, so true to all the actualities, so appreciative of all qualities of worth and so kindly toward all infirmities of constitution and environment, as to command the assent of the negro himself and the approval of mankind."

The last three decades have seen many new departures in education, but the last ten years have been especially conspicuous for new things, termed by some of the more conservative element, "fads" and "frills." These additions to the course of study are the attempts of the educator to adjust his work to the demands of the age, to give the child during the school period such work as will develop social intelligence, social sympathy and social power. We have only made beginnings in these things, and some of them in a blind way. It is a large problem which confronts us, as educators, and one to which we must give more careful study before we are able to meet the demands of the age.

That the schools have not been meeting popular needs is evi-

denced by the large number of pupils who drop out of school from the time they can earn a dollar, and by the small percentage of students in the high schools. Many are the reasons that are given for the dropping out of children, but after all are considered, I believe the great majority of them are due to two things: ill-adapted courses of study and discouragement on the part of the pupil. It is an easy matter for the pupil who is irregular in attendance and backward in his work to drop out. He seeks more congenial and more profitable employment. Then too, as Prof. Burks says, "There is undoubtedly a widespread feeling among parents and children that the last years of the elementary school do not pay; that the opportunities of these years are of no direct value to children destined for industrial and domestic pursuits. At the close of the fifth or sixth year of school, pupils have attained a moderate proficiency in reading, writing, and simple calculation, and have some knowledge of geography and the history of their own country." The child or parent sees no use of continuing these same subjects two or three years longer when the child might be contributing to his own support.

The recent report of the Massachusetts Commission of Industrial Training, though not conclusive on this point, furnishes strong indications that this attitude toward the practical value of school training has a much more direct effect upon the dropping out of pupils from school than has economic pressure or the blindness of parents to the higher interests of their children. About half of the parents of children who had withdrawn from school before the age of sixteen, stated definitely that if there had been courses for industrial training offered in the public schools they would have kept their children in school instead of allowing them to enter the low grade and unskilled industries which alone are open to them. More than seventy-five per cent of the parents of these children, according to the report, were financially able to keep their children in school if it had seemed desirable to do so.

It is evident, then, that the low estimate placed upon the value of the last years of elementary school training is a powerful factor in determining the length of the school life of children.

Let us now ask whether this estimate has proper foundation or is based upon essential error.

Here again the report of the Massachusetts Commission presents evidence of great value: "It is shown that the years from fourteen to sixteen, whether spent in school or at work, are wasted years so far as concerns the permanent earning capacity of the great mass of boys and girls who enter industrial and domestic as distinguished from commercial and professional pursuits. Those children who enter unskilled industries at the age of fourteen are put at work that requires extremely little intelligence and therefore possesses practically no educational value. Owing to this arrest of development, these children soon pass beyond the point where the opportunity is open or the impulse is active for them to enter skilled pursuits. The wages of two to four dollars per week received at the outset are scarcely enough to meet the actual cost of living of a boy or girl, much less to enable him to begin the habit of systematic saving. Within a few years these children reach the maximum of their earning capacity at about nine dollars per week. This is at so low a level that they are condemned to lives of uncertainty and of poverty if not of degradation."

Then we are told that those who remain in school until they are sixteen or seventeen years of age reach a higher level of wages, but that they are greatly lacking in industrial intelligence.

Soutuern educators and social economists are fast coming to the conclusion that the loss of pupils in the elementary grades is due to our failure to realize their needs and to provide work for them in keeping with these needs. Says the same authority quoted before:

"We take boys and girls at a time when their impulses are strong for active participation in the vital interests of life, and we confine them within narrow schoolroom cells, with books and pencils as their chief or sole means of participation; we take them when their desire for social coöperation is a dominant motive, and we require each to work for himself upon tasks which, so far as he can see, have little to do with the great world outside of the school walls; we take them at a period when their

capacity and their instinct for individual initiative is strong, and we expect them to work under the constant direction and control of a teacher — their problems artificially assigned, their coming and going, their starting points and stopping places determined for them; we take them when their individual difference in capacity, interest, and prospective careers are properly matters of growing and vital concern, and we require them to pursue a uniform course of study having little direct relation to these specific powers, motives and prospects."

And so it seems that our schools are giving training rather for a life of leisure than for vocational pursuits — for a small minority rather than for the majority of our citizenship. It would appear then that there must be a reorganization of the work for elementary and high schools. When this comes we will recognize individual differences in native capacity and in prospective careers of pupils. This work has already begun in spots throughout the country and I am glad that we are to hear from Superintendent C. B. Gibson, of Columbus, Ga., to-morrow, who is perhaps doing more for white children along the lines indicated than any other man in the South.

My friends and fellow-members of the Southern Educational Association, these questions of school attendance, illiteracy, how to get better trained teachers and the money to pay them, how to awaken public sentiment to the importance of better educational facilities, and the reorganization of our scheme of education to fit the needs of our day, I consider to be the matters of greatest importance in the educational field of the South. I trust that this Association may be able to do its part in helping to bring about the needed reforms. I believe that we should begin now by mapping out a definite kind and amount of work to do during the coming year, and I believe that nothing will conduce more to the success of this Association than adopting a progressive policy that shall help to bring things to pass by directive and combined efforts.

INDUSTRIAL EDUCATION

Superintendent C. B. GIBSON, Columbus, Ga.

The theme is not of my choosing, but was assigned to me by the President of this Association; and it was assigned not by reason of any superior knowledge of the subject, but because the city I have the honor to represent has been bold enough to make some departures from the usual forms of city school work and to make prominent in its scheme for education the principle that the dominant life of the community should largely determine the form of educational work carried on.

In the minds of many good and intelligent persons, industrial education is looked upon as something entirely different and apart from education — as if education ordinarily carried on is one thing and industrial education quite another. As a matter of fact, there is no difference between education derived through formal and traditional school work and education through industry, except perhaps that the one gives a certain fund of stock knowledge of the schoolroom and the other gives a certain skill of hand and an acquaintance with materials. Industrial education differs from academic education only in the means used to attain practically the same end — a useful citizen.

INTRODUCTION BITTERLY FOUGHT

For a long time it was recognized and accepted intuitively by school men as a well established fact that the State had lawfully and morally no part in the industrial training of its youth. And upon this assumption the introduction of manual training into school systems was bitterly fought by educators and the public generally, who believed that legitimate education consisted only in training through the humanities.

Manual training, however, finally gained a hold upon the public schools, first for its educational value, and later in some vague, indefinite way it came to be recognized as a legitimate factor in school work for its economic value also. But only during the present decade, indeed, during the last two years, has

specialized industrial training or vocational education come to be recognized in any community in the United States as a legitimate part of public education. The wisdom or legality of such recognition depends upon the view we take of the purposes of government.

A DEPARTMENT OF GOVERNMENT

Public education is a department of government or a medium through which government expresses itself for the people. The education of all the children of the people at public expense has long been regarded as a legitimate function of government; first, that the government might not have ignorant citizens who would be in danger of becoming criminals; later, that the government might have a higher average type of citizenship and so develop a state in which its educated citizens might find a just pride.

It has perhaps been left for the latter years of this decade to bring out a more liberal view of the functions of government. Many statesmen and thoughtful citizens are beginning to realize that the full and complete purpose of government is not alone protection against crime and ignorance and pauperism, but that it is the full and complete development of all its citizens. It is not sufficient that school-houses and churches be established in communities to supplant or lessen the need of jails and police protection, but there must be in the citizens constructive and creative ability to contribute to the wealth and general welfare of the community. The ideal citizen must be not only a person of intelligence and culture, but he must be also an efficient, economic unit.

PROMINENT THEME TO-DAY

The theme is to-day a prominent and popular one not alone with educators, but with statesmen, manufacturers and men of large business affairs. The President of the United States does not hesitate to declare it the most important problem of the public schools. The organization of the National Society for the Promotion of Industrial Education, composed largely of the great capitalists and manufacturers of this country, is significant. The prominence given to the Commission for the Study

of Industrial Education appointed by the State of Massachusetts, not only in that State but throughout the entire country, shows the trend of public thought on this question. The remarkable growth of industrial and technological schools everywhere indicates a widespread desire for this form of education. Perhaps no effort at educational work has so enlisted the genuine interest and support of the largest taxpayers, the chiefs of industry and finance, as the trend of education towards what they have been pleased to term practical subjects.

ANY PREPARATORY WORK LEGITIMATE

More and more the school is becoming articulated with life work, and the fact is gradually being accepted that any work carried on in the school which prepares directly for intelligent and efficient service to mankind is legitimate, whether it be in the learned professions, in business walks, in manufacturing, in agriculture or in any form of industry.

Education should prepare for life, and if the dominant feature of that life be agriculture, education leading directly to preparation for that kind of life may properly be given in the schools; and when agricultural education is attempted in the schools of a certain section of the country it should be adapted to the particular needs of that section of the country.

If it is found that a very large per cent of the children going through the elementary and secondary schools find their bread-winning occupations in some form of industry, it is not only the privilege, but the duty of the community to prepare this large number of children for intelligent and efficient service in their chosen occupations. The aim should be not only to make the young citizen intelligent, but to make of him an efficient economic unit.

FIVE PER CENT PREPARED IN SCHOOL

Recent investigations conducted by the educational department of the International Committee of the Young Men's Christian Association demonstrated that of thirteen million young men in the United States between the ages of twenty-one and thirty-five, only five per cent received in connection with their school education any preparation for their several occupa-

tions. It was also discovered that of every one hundred graduates of our elementary schools only eight obtained their livelihood by means of the professions and commercial business, while the remaining ninety-two supported themselves and their families by the skill of their hands.

If ninety-two per cent of those who complete the elementary school course go into some form of bread-winning occupation where the efficiency of their service and their wage earning power will depend upon skill of the hand, should not the elementary school seek to become more closely articulated with the life into which its graduates must go to find their livelihood? Add to these graduates the large number of those who fall out of the elementary schools from the fourth grade on, and we have a vast army of young people going into the bread-winning occupations with no specific training therefor.

LEARNED PROFESSIONS ONCE IDEAL

In ages more or less remote, the ideal in education seemed to be to get a very small per cent of our young men through college and university courses in order that they might enter the learned professions — medicine, law, and theology; and almost no thought was given to the vast majority, possibly ninety-eight per cent, of the youth of the land who for one reason or another could not reach the end of a university course. There stood out before educators only these three goals towards which they urged on the more favored of their students in ability to do scholastic work. Indeed, it was often considered somewhat of a stigma to make so great a failure in school, college or university work as not to reach one of these goals, and fall into the baser occupation of trade or still baser occupations of industry. It mattered little what the young man's earning power was or the efficiency of his service to mankind if only he could become a limb of the law, a doctor of medicine or a young theologian. And if after vainly struggling for several years he could not earn his daily bread in one of these professions, he might honorably try school teaching.

The less fortunate boy who fell by the wayside and donning his overalls went to work at some industrial occupation where in

time his wages might amount to as much as twenty-five dollars a week, was looked upon with disfavor by the young man in the gentler walks of life whose "salary" was no more than twelve dollars a week. This increased earning power of the young man of overalls represents a higher degree of intelligence and efficiency of service to mankind in his industrial occupation, as surely as the lower earning power of the other represents the lower degree of intelligence and efficiency of service to mankind in the gentler walks of life.

OCCUPATIONS QUITE AS HONORABLE

The wonderful achievements in engineering, manufacturing, commerce and agriculture are forcing the American people to regard these occupations as in every sense quite as highly honorable as the so-called learned professions. And the schools are coming to recognize more and more that those studies, even elementary studies, which prepare the youth for successful experience in these occupations, have as legitimate a place in the school curriculum as any of the humanities.

In earlier days industries and trades were often taught in the good old farm homes, not only to the slave blacks, but to the children of many of the best people of the country. Before the building of great cities and the vast network of railroads, the farm home often had its carpenter shop, sawmill, blacksmith shop, cooper shop, tannery, shoe shop, and many other industries, and the boys who had little schooling often had valuable training in these industries; and in the little world about the home they contributed for a term of years in some special industry valuable service that came from such crude specialized training.

And I dare say that such training had as much to do with the development of the men who in the larger cities in after years became leaders in commerce, in manufacturing or in statecraft, as any formal school training they might have received. I have in mind a man who belongs to one of the foremost families in the South and whose wise mother in such a home saw to it that not only he but that all of his brothers had special training in some one of these industries. His specialty was cobbling. That

man, after serving through the war, settled in a city of the South and is to-day its most successful banker and manufacturer, and who is regarded by everyone as preëminently the first citizen of his city. The training that was given in this crude way in the old farm home should, in the passing away of these old homes, be given in the schools of the land.

IDEALS OF A PEOPLE VARY

The ideals of a people vary, and as they by slow degrees deeply and definitely impress themselves upon the hearts of the people, they with unfailing certainty influence the means that are used for the education of the people and development of the national character. If the ideal be beauty in symmetry and strength of human body, athletics will be the means of education. If the ideal be skill in arms and conquest through warfare, a soldier's training will be the means of education. If the ideal be the traditions of a people, a constant conning over the things of the past and the glorious achievements of their forefathers will be the means of education. If the ideal be profound knowledge of the classics, a study of literature will be the means of education. If the ideal be achievements and discoveries in science, the laboratory will become the workshop of the school. If the ideal be the transformation of boundless stores of raw material into products that contribute to the needs and comfort of man, skill of hand will be the means of education.

As Greece and Rome and the Orient and Western Europe have in ages past had their several ideals, so America to-day seems to be coming into a clearer vision of an ideal of industrial supremacy. Only one other nation in the world has preceded her in the realization of that ideal.

GERMANY ENVIABLE THROUGH PERSISTENCE

Germany, a land of limited resources, a land lacking the fertility of soil with which our country has been blessed, forced to import much of her food supply, almost entirely without mineral wealth, a land hemmed in by countries with hostile tariffs and unfriendly trade relations, a land in the main without native artistic sense and devoid of the inventive ingenuity of the American, has, through the persistent training of her children's

hands, first in the homes and for the last half century or more in her public schools, reached an enviable position of commercial and industrial supremacy.

To this little nation America, with her vast resources of fertile stretches of land and inexhaustible mines of mineral wealth; with her boundless forests and unlimited water power; with coal and iron and limestone lying side by side with which to make easy the transformation of iron ore into all the products of the iron market; with marvelous power in the midst of her cotton fields to transform the fleecy staple into all the varied products demanded by the world for clothing; with characteristic native ingenuity and inventive skill; with engineering ability that has removed mountains and made the arid desert to blossom as the most fertile plains; with the markets of the world open to her on all sides — America must be outstripped in the race for commercial supremacy by her less favored competitor.

UNIVERSAL MANUAL SKILL LACKING

And why? True, we sent into the markets of the world last year $1,800,000,000 worth of products. Marvelous combinations of capital and aggregations of business skill greatly reduced the expense of production and sent from American factories an amazing output. Nature aided largely with raw material and wonderful power, and American genius gave splendid means of transportation; but with all this there was lacking one significant and important factor — universal manual skill on the part of the workers.

While from our fields there went into the markets of the world more than $1,000,000,000 worth of products, general scientific agricultural education could be credited with very little of this wonderful production. Only the premonitions of such education have been felt in the great West and Northwest, and in no degree whatever have the fields of our fair Southland felt that awakening of Nature which comes from the quickening touch of gener l scientific farming.

And while our nation gave to the markets of the world $100,000,000 worth of products from under the earth, there was lack-

ing in this combination of business ability and mining engineering, an equally important factor — universal skill of hand.

Our factories, with marvelous power, cheap fuel and Yankee business ability, added to the commerce of the world $700,000,000 worth of manufactured products; and while American inventiveness in the production of modern and efficient machinery enabled us to produce these goods economically and well, skilled handicraft played almost no part in their manufacture.

MANUAL TRAINING WAS NEEDED

Endowed lavishly with raw material, inventive ingenuity, business skill, and unlimited power, what might we not do in the commerce of the world if we had only followed Germany's wise example fifty years ago and put into our public schools everywhere manual training and industrial education?

Our forefathers unwisely based their aspirations for industrial supremacy upon a protective tariff, which was to foster infant industries and add profit to the capitalist in his competition with foreign nations. This protected the manufacturer but failed to protect the people who were converting for him his raw material into marketable stuff, except in so far as it gave them employment.

While we were struggling upward under a protective tariff, Germany was steadily marching on to industrial supremacy under universal industrial education. To-day we are waking up as a nation to the fact that we have made a mistake, and to-day leaders of thought in statecraft, commerce and manufacturing are beginning to realize that universal industrial education is far more important than a protective tariff.

SOUTH JUST AWAKENING

The South, with natural advantages vastly superior to those of New England, is just awakening to the marvelous possibilities that lie in her fertile fields, her rich deposits of coal and ore, her great forests and her wonderful water power. Industries are springing up on every hand, cotton factories and mill villages are planted on almost every hillside throughout Georgia and the Carolinas. Alabama is beginning to transform her wonderful mineral wealth into marketable products, and while she

has learned to convert her iron ore into pig iron worth half a cent a pound, and that into steel rails and structural iron worth several cents a pound, she has not through skillful handicrafts developed in her own sons, learned how to convert the same iron into products worth several hundred dollars a pound.

The South — the New South — with all the glorious memories and traditions of the Old South clinging about her, has come, through suffering and struggle and great tribulation, to a vision of a land of promise rich in the possibilities of wealth and the happiness of her people.

ADJUST EDUCATIONAL SCHEME

And what is the school man's duty in this momentous hour? With searching gaze upon the ideals and institutions and customs and traditions of the past to discover in them those factors that contributed most to the service and happiness of mankind, let him turn his face reverently and earnestly to the future, recognize the trend of national life, of sectional life, of community life, and making this a basis of his thinking, adjust his educational schemes accordingly.

Scientific child study, educational psychology and history are all good in themselves, but they are insufficient, singly and collectively, as a basis upon which to build a broad scheme of education that will meet present day needs. The school must become linked more closely to life and must prepare its students for efficient service in the life into which we send them.

APPLY BUSINESS METHODS

I would not lessen one iota the cultural influence of the school, its noble work in development of character, the high ideals of conduct that may be placed before youth; but all this can be made a prominent feature of the work even of the school shop. My belief, based upon experience, is that the boy working daily in the school shop becomes more susceptible to those elevating and cultural influences of the school, becomes more interested in his purely academic work and develops more surely a strong, manly character.

We hear much of the overcrowded curriculum, enrichment of courses of study, disastrous tax upon the strength of teachers,

and the murder of the innocents in the public schools of the land. I believe that when we tear away from the traditions of school work, and, recognizing the educational value of properly-directed play, physical culture, manual training, domestic science and in the higher grades of the elementary schools and in the secondary school, even of specialized training for trades, give these subjects a place in the curriculum in lieu of much that is now there and has been there for ages past; and when coupled with this we extend the departmental plan of teaching, when more specialized work is done by the teachers, we will hear no more of the overcrowding of the curriculum, and the nervous prostration habit will grow less. Indeed, when we apply to the schools more up-to-date business methods, we shall be able to eliminate much of the waste that is now going on in education through short daily hours, numerous holidays, long vacations, idle school buildings, unused equipment, lost opportunities; we shall be able to take the child in the kindergarten, or perchance, with many classes of people in the community, in the day nursery, carrying them with natural, normal means of education, on through the elementary schools, even with longer hours and longer sessions, turn them out of our secondary schools in much larger numbers, prepared for immediate, intelligent and efficient service to their community and with good, satisfying earning power for themselves in some honorable occupations. Then we will have more than two per cent of those who enter the kindergartens to go through the high schools. While the colleges remain and maintain their present academic standards, these same schools will be able to meet the requirements of those standards and send to them a much larger number of boys and girls who through interest in their elementary and secondary school work have remained in school and received the benefits of instruction in academic subjects.

SOME PRACTICAL MEANS FOR THE IMPROVEMENT OF TEACHING IN THE ELEMENTARY SCHOOLS

Superintendent J. H. VAN SICKLE, Baltimore, Md.

The indispensable minimum of scholarship for teaching in the elementary schools is usually provided for by the requirement of high school graduation or its equivalent as a condition of employment. Not many years ago graduation from the high school was very ill-advisedly taken as complete evidence of ability to teach. A few years earlier a still lower standard prevailed. Everywhere there are yet teachers in the service whose attainments at the time of their appointment were tested only by an examination about suited to pupils in an upper grammar grade of an elementary school. These, however, at least in the city schools, are few, and they have gained increased scholarship while teaching. In either case the young teacher was placed in charge of a class with only the empirical ideas about teaching that came unconsciously from years of association in elementary and high schools with her own teachers, themselves in many instances not especially well qualified for their work, and consequently presenting for imitation not the best models. A teacher thus equipped has some knowledge of the common branches; but she knows little of the learning process, and therefore her efforts are uneconomically expended. She does not know how to present subjects in such a manner as to engage the child's best interest and call forth his best efforts, and consequently disciplinary problems are the prominent ones. She begins with the youngest children because these are the only ones she can keep in order. A few teachers of superior natural ability quickly gain considerable skill; others in the course of time achieve a moderate degree of success; and still others equally conscientious and faithful begin their work in a purely formal and mechanical way and, if left undisturbed, soon become chained in a dull and lifeless routine.

In personal qualifications public school teachers, as a rule,

rank high. Morally and socially they justly hold a firm place in the esteem of the people. Some self-trained teachers who have agreeable social manners outside of school do not, however, exhibit them in their conduct with children. This is due to the professional ideal which they hold. There is a false ideal of discipline. They feel that if they were kind and gentle with the children, the children would take advantage of them. Under this ideal and practice the voices of such teachers become unnatural and strained. The voice becomes a school-room voice and the manner a schoolroom manner. There is too much tension. A more natural attitude needs to be cultivated. While the fact that the culture and general scholarship of the rank and file of teachers are above their professional knowledge and skill in teaching points to the necessity of improvement, it also furnishes a firm foundation for such improvement and guarantees valuable results. The only approach to professional success lies in continuous professional progress, and this is best furthered by the performance of every-day schoolroom duties in a professional way. All reading, all courses of lectures, all conferences, all supervision should tend to concentrate attention on the work to be performed. Thus focused, they are not added burdens but recognized aids in the actual day's work.

The majority of the teachers who have entered the service in our cities in recent years have had the benefit of a high school course and, in addition, either well attested experience elsewhere or professional training. They enter the service through State normal schools or city training schools. Here they pursue a course of one or two years devoted to theory and the observation of good teaching, and they get some practice under expert guidance. But at the close of the period of training their preparation for teaching is only well begun. Professional study and preparation for teaching can really go on in the most effective way only when the candidate enters into actual service. It will not do, therefore, to consider that the necessity for expert guidance ceases at this point. Supervision by experts must be continuous. For varying lengths of time, according to the need of the individual teachers, it will be close supervision, and it will deal definitely with class and grade and selection of subject

matter and lesson plan; educational principles will be approached and tested from the practical standpoint.

Teachers in actual service and more or less in need of after training may be considered in groups which, omitting minor differences, are somewhat as follows:

(1). Superior teachers who need no stimulation other than their own ideals of excellence. By the fine standard of work which they maintain and by their studentlike habits they might, under favorable conditions, set the pace for the less efficient. With this group supervision is chiefly concerned in gaining their coöperation in working out problems and in making their skill serviceable to other teachers.

(2). Teachers possessing a good degree of executive ability and adequate scholarship of the book-learning variety, who resist change because they honestly believe the old ways are better. They are patriotic defenders of the views and traditions and practices in which they were reared. The greater number of these will as strongly support the new when fully convinced of its advantages; but in the absence of positive orders they resist proposed changes until absolutely conclusive demonstration is furnished in a concrete way. Supervision must confidently accept these conditions and furnish the demonstration.

(3). Teachers lacking adequate scholarship or practical skill or both, self-conscious and timid, because unacquainted with standards of work and valid guiding principles, desirous of avoiding observation, doing their work in a more or less perfunctory and fortuitous way. Supervision needs to give these teachers courage by an exhibition of standards plainly within their reach and by personal work in their own school-rooms.

(4). Teachers lacking adequate scholarship or practical skill or both, but not conscious of this lack and therefore unaware of any need of assistance. Some form of positive direction is here necessary in the first stages of supervision.

(5). Teachers yet in the early years of their service. They have, as a rule, had some professional training and from it they have gained one thing at least of value beyond all else: namely, a professional attitude toward the work of teaching. Supervision should be able to concern itself chiefly in keeping these

teachers in Class 1 so far as their professional attitude is concerned. There will, of course, always be differences among them in scholarship and personal power, but all should have guidance in kind and quantity adapted to prevent any of them, even the weakest, from developing the characteristics of Class 2, Class 3, or Class 4. If these new recruits are to be able to lead children to be open-minded, to hold opinions tentatively, to be sure but not too sure, to be willing to give both sides of a question a hearing before reaching a final conclusion, they must keep themselves open-minded. To aid them in doing this, supervision will keep itself free from dogmatism even in dealing with the youngest teachers.

Teachers of Class 1, Class 2, and Class 5 are willing to have their work seen and valued by competent and trusted supervisors. People who know how to do a thing, or who sincerely think they know how, or who sincerely wish to learn how, are neither afraid nor reluctant to have their work seen by any fair-minded person. Supervisors must be both skillful and fair-minded and their work must prove that supervision means help. How shall the help be rendered? The need to be met has been thus aptly stated by a skillful supervisor:

"After many years of careful, sympathetic observation I conclude that the nervous strain, the feverish rush, and the soul-killing anxiety supposed to result from crowded curriculum and large classes is in reality largely due to a lack of knowledge of the science and skill in the art of teaching — to a lack of that refinement of technique which enables the artist to sketch in a moment that upon which a tyro would for hours vainly struggle. Violations of the laws of mental development and crude class administration lead to losses of time and effort which would not be tolerated in a properly managed business — losses resulting from: poor grading; poor grouping; awkward distribution of material; teaching form divorced from thought; teaching unrelated ideas; waiting for slow pupils; combatting wrong habits resulting from poor initial teaching. These and other sources of subtle waste exhaust the energy of the average teacher and leave her overwhelmed, discouraged, while twice the work required of the grade is done with ease and pleasure by the teach-

er who can either instinctively or reflectively apply to every phase of her problem the principle of economy."

The policy of letting each teacher work out her own and her pupils' salvation unaided except by the general teachers' meeting and similar devices is too wasteful for exclusive use. Something more personal and definite is needed to meet the unnecessary condition of nervous strain and anxiety and its resulting waste that is in these recent years so evident in our schoolrooms. This individual help is most effectively given by grade supervisors who devote their entire time to one, or at most, two grades.

In what follows I shall have chiefly in mind cities in which the number of teachers does not fall below 125 or 130. While in smaller cities such close grade supervision is impracticable, the idea in modified form is applicable. It is the most effective as well as the most economical form of supervision where the number of teachers runs above twelve or fifteen to a grade; for isolation of subjects so common when special teachers are employed is thereby avoided if each grade supervisor is, as she should be, competent to illustrate the proper presentation of all the subjects in the course of study for her particular grade or grades.

The principal is selected largely because of his superior administrative ability, and though he is also, presumably, a successful teacher, he cannot in reason be expected to be equally an expert in the actual performance of the work of every grade. It is the principal's duty to help all who need help. Since, however, his duties cover a wide range, including, as they do, the business management of his entire school or group of schools and educational responsibility for the work of teachers in each of the eight grades, he needs the assistance of grade supervisors who, by devoting their whole attention to one or two grades, become more expert in them than the principal could be. The grade supervisor's position affords the opportunity of comparing the corresponding grade of work in many schools, denied to the principal, to whom weak teaching seems less glaring through the absence of contrast. To be most helpful the suggestions of the principal and grade expert must be desired. While the ini-

tial step would never be taken if the supervisor must await the dawning of a desire for help on the part of some teachers (*e. g.*, those of Class 4) it is none the less true that if, after some change in the form of things has been wrought under positive direction, little permanent good will be accomplished if such a desire does not appear. The chief reliance in securing a hospitable reception for measures of improvement must always be a desire that can generally be counted upon, namely, a desire to attain excellence.

But the superior workers in the field of education have a right, as have superior workers in other fields, to protection from the competition of the unprogressive and inferior workers. To give the same salaries to all teachers, regardless of merit, is positively to discourage effort. It would not be fair, however, either to teachers or to the children they teach to reward highly efficient teachers and fail to provide specific help and direction to enable the less efficient to increase the value of their services. To secure the fullest possible utilization of facilities for professional growth there must be professional requirements for advance in salary on a merit basis.

Many teachers find joy in work well done so satisfying that the increased remuneration which good work brings is to them an incident, agreeable to be sure, but not in any strict sense the motive which causes them to be zealous and active in utilizing means for professional growth. They are glad to be measured by professional standards, however, and they cheerfully and easily comply with the conditions imposed by the school board.

What should these requirements be? To some extent the answer will depend upon local conditions, but everywhere these characteristics, it seems to me, might well appear: (1) satisfactory evidence of increasing power in the management of children and in grasp of the details of school work; (2) increase in general scholarship, and in particular, increased mastery of English, which means not merely the ability to write grammatical sentences, but the power of thinking out a subject clearly and logically and setting it forth in effective exposition or argument; (3) for the highest recognition, some evidence of ability to dis-

cover problems in the daily work and to think independently in working them out.

Any plan that is adopted should most carefully avoid drawing the attention of the teacher away from the particular group of children which she is teaching. The improvement demanded should be such as may best be secured through the superior doing of the work in hand. Promotion should not necessarily involve a change to a higher grade lest the very effort put forth by the teacher to secure promotion lead to some slighting of her present work.

When approval of the regular schoolroom work is the prime condition set for advance in salary, the grade supervisors are welcome visitors. It is their function to give help in any way that seems best in each individual case. They teach to indicate proper selection of subject matter, methods of presenting it, and methods of discipline. They work out entire plans for the use of teachers not as yet skilled in organizing the material in the course of study. Later they help these teachers to work out other plans for themselves. Some of the work is individual and some is with groups of teachers having similar needs. The coöperative relations thus secured lead to a frank statement of difficulties and joint effort in meeting these difficulties.

The supervisor comes as a friend who has no other purpose than to endeavor to aid the teacher in reaching a desired goal. It is clear that every supervisor must do illustrative teaching. But to grow she must do more. She must study problems which are constantly arising, and to do effective, sympathetic work in supervision she must actually work out these problems with children. She must, in short, conduct a traveling normal school in which she takes classes just where she finds them, teaches to conquer certain difficulties which the regular teacher has met, does this in the presence of visiting teachers of the same grade from neighboring schools who make note of all that is done. Following this, the class being dismissed, there is full and free discussion in which the supervisor explains each item in the procedure and meets all objections and inquiries. A specific example: In geography and history we wish pupils in the upper grades to use a number of text books for independent

study instead of having mere memory work in lesson-getting and lesson-saying from one text. Teachers accustomed to assign a lesson from a single text book and later test the children on the lesson assigned found it difficult to manage in any other way. After visiting a class to learn what topic was under consideration and planning a lesson thereon, the supervisor gave to that class a lesson in history and one in geography, assigned work in each subject from a number of books which would enable pupils to solve the problems brought out in the class presentation, and in the following recitation tested the result of such study— in short, taught units of work, the presentation, the study period, the test of the study period. This was the work of a single morning.

Sometimes the supervisor selects a unit of work requiring more time and involving a series of lessons given on successive days — a large topic in history, for example; the aim being to show the related work in language necessary in the formulation of a suitable outline, correlated geography, reading matter, and spelling. The supervisor has prepared in advance a typewritten plan which she proposes to follow in giving the series of lessons, and the visiting teachers have been supplied with copies. Type copy in hand, they see the work carried through to the end; after which each teacher present prepares a plan for teaching some other large topic and submits it to the supervisor for review and suggestion. When supervisor and teacher are associated in working out a problem the actual teaching is participated in by both, the teacher frankly discloses any weakness of which she is conscious, and ideal relations tend to get established.

Not all teachers are well fitted to furnish correct models in English speech and composition. Any scheme for the improvement of teaching will do well to reckon with this fact. It is difficult to think of any line of professional study for the young teacher in the first year or two of service that will yield results as useful to the school system as study tending toward accuracy and facility in the use of the mother tongue. It is a well-known fact that many students secure a satisfactory general average of scholarship at graduation from the high school, when their equipment and power in English are not at that time equal to a

teacher's needs; yet such graduates frequently develop afterwards into very good teachers. Accordingly, in Baltimore all candidates for the first promotion in the teaching service are required to show that since their graduation from the high school they have made appreciable progress toward the attainment of that sound judgment and refined taste in English which is the outcome of wider reading and study and greater maturity of mind than can be expected in high-school students. It is proper, therefore, and we think desirable, after a teacher has received advancement to a certain point through the automatic operation of the rules governing the salary schedule, that further advance be conditioned upon the passing of an examination in English set for the purpose of ascertaining: (1) whether the teacher's own hold upon English is satisfactory; and (2) whether the teacher is in possession of some good aims and methods for the instruction of children in English composition and literature.

A teacher should be able to speak and write English with absolute correctness, and also to interpret correctly any ordinary piece of classic poetry or prose. This requirement, though, is not extensive enough; for in fact, quite meagre attainments suffice to make one simply correct in the use and understanding of English. Many persons speak and write in a way that is not incorrect, but their English is decidedly ineffective. Mere correctness in English is not enough to insure success in teaching. To succeed in the classroom, one's words must be effective; and effective English does not come unsought. For the production of effective English the teacher needs all the art that can be mustered. Similarly, the teacher must be able not only to understand classic literature but also to interpret it effectively to children; and expertness in interpretation can be secured only by systematic study.

As it is necessary for the teacher to have an effective command of English, and as it is improbable that he can gain such command without deliberate study and practice, it would seem that any candidate for promotion ought to be more than willing to show that he has pursued a course in English comprehensive enough to include review of grammar; a good introduction into

rhetoric, accompanied by sufficient practice in composition; and a careful study of a number of English classics.

After teachers have successfully met this requirement, the special kind of progress which we wish next to emphasize is the ability to discover problems in the work one is actually doing, so that professional growth may occur through the doing of each day's work in a professional way. Satisfactory evidence of such progress may consist of an essay and discussion, class-room demonstration, and an examination on relevant professional books.

The promotional requirement for teachers of experience is not an examination in the ordinary sense of that term. It is given not at all for the purpose of finding out how much teachers know, and not wholly to find out what they can do. It has a dynamic purpose: to direct attention to problems which press for solution, and to cultivate in teachers a tendency to deal with these problems in a thoughtful way. It is described in our rules as "(a) a written report of the working out of some problem of teaching or the study of a particular group of children; (b) such a defense of the report before a Board of Examiners consisting of the Superintendent and two other members selected by him, as will evince familiarity with educational literature bearing on the problem or study; and when required (c) a classroom demonstration before a board similarly composed."

It will be observed that the rule defines the essay as "a written report of the working out of some problem of teaching, or the study of a particular group of children." This means that the teacher is not expected to prepare an abstract or academic discussion having no relation to his own classroom problems. The essay should, on the contrary, grow out of the candidate's actual teaching; so that, instead of his being distracted from practical problems while working for the promotional examination, he shall be the more intently studying his daily work. And in case the examiners think that an essay has been written with too little reference to the candidate's actual teaching, they will feel at liberty to call for the "classroom demonstration," in which it must be shown that the candidate was not merely theorizing in his essay.

It is explained to teachers that they need not hesitate to attempt such essays as are contemplated in the rule. No great display of learning is expected, but only a clear and simple presentation of every-day schoolroom experiences that have had some educational significance for the writer. To the observant teacher, who is really trying to understand the forty children committed to her care, every school day affords such experiences; and her experiences will not exactly duplicate those of any other teacher, for her children are in many particulars unlike any other children. Her observations may tend to verify or contradict what she has previously read or thought; and in either case she will be led to read further in books that treat of the aspect of teaching which has attracted her interest. Out of such reading, and observation, and thought will come ideas well worth being committed to writing; and these, when clearly and definitely stated, will doubtless form an acceptable essay. Or a teacher may secure permission to apply to her class some special plan of teaching or governing, and from her day-to-day records of this plan draw up an interesting and instructive discussion.

Or why should not a teacher undertake to throw light upon classroom problems by showing how one or another procedure appears from the child's point of view? Let her show, for example, how the child is affected by this or that attitude on the teacher's part, or by this or that requirement in discipline or study. This would certainly involve "the study of a particular group of children," and would therefore, if well done, fully satisfy the requirement. Hundreds of teachers have experiences just as interesting and just as worthy of permanent record as many of those which have in recent years found a ready market in the form of magazine articles. In fact, there are as many ways of satisfying the essay requirement as there are different tastes and aptitudes among teachers; and every good teacher is sure to become a better teacher by undertaking from time to time some such composition. The essay, when presented, must be accompanied by an outline showing the trend of the argument and the conclusions reached, and by a list of the books consulted in making the study.

It is explained to teachers that as their classroom work must

be entirely satisfactory when they come up for this second advance in salary they may get a preliminary judgment of their teaching before they undertake the essay or at any time during its composition, and that in case this judgment is not favorable needed help will be given to enable teachers to bring their work up to a fully satisfactory standard. As before explained, this help is given by principals and by grade supervisors who, under such circumstances, come as welcome co-workers. Supervision of this kind is seen to be not merely inspection, but help of the most sympathetic and practical kind.

The difficulty in carrying into effect adequate plans for the ceaseless improvement of a large teaching force is enhanced by the tremendous rush in which city life goes on and by the rapid change in the personnel of the teaching force, and even the supervisory force itself. While the problem must, in the nature of things, be regarded as incapable of any wholly satisfactory solution, such immense gains are everywhere being made as to justify a spirit of optimism.

PLACE AND FUNCTION OF THE STATE NORMAL SCHOOL

President R. N. ROARK, Eastern Kentucky State Normal School.

I desire at the beginning to reiterate what I never miss an opportunity to say, and that is, it has been a great misfortune that teachers' training schools should have been called normal schools. The name is probably too well fixed ever to be taken off of them, but it is certainly true that every kind of school should be a normal school, that is, should teach according to the norm or natural rule, but training schools for teachers should be *called* training schools for teachers, schools of pedagogy, or schools of education.

I am assuming in this discussion that the sole function of a State training school for teachers is to do what its name indicates, this is, train teachers, and put the public in sympathy with their work. With much chagrin, I have noted in the catalogues of many State normal schools that they seem anxious to secure such recognition of their work as will make them preparatory schools for the universities. Others announce that they confer academic degrees such as are usually conferred by colleges. The most wholesome thing that could happen to these State normal schools and to others similarly afflicted is to come promptly into the positive and clear realization that their true and sole function is to prepare teachers for their work, and to prepare the school-supporting community to sustain the teacher in that work. To realize this fundamental truth and carefully to differentiate the work of all the various factors in a State school system would be to clear the educational atmosphere and permanently to eliminate all chance for friction between institutions receiving the State's money.

I conceive Jefferson's scheme of a State system of education to be theoretically sound and it has been worked out with excellent results in several commonwealths since his time. The essentials of a State system are (1) liberally supported elementary

schools, made to reach every child between the ages of six or seven and fourteen; (2) a strong chain of secondary schools, urban where the population is largely urban, made up of township or county high schools where the poulation is largely rural, and (3) the whole crowned with a university of high rank. The State normal school, although an integral and necessary part of such a system, has its proper place rather to one side of it than in it, and stands as a nourisher and quickener of every element in the educational organism. From the State normal school should come all of the teachers who work in the elementary schools of the State. Until ideal conditions obtain, it may be better for city normal schools to train the teachers for city school work, and there will probably never come a time when a good city normal school in the larger centers will not be needed. As matters now stand, one of the chief objections to the city normal school is the pernicious in-and-in breeding which it cannot avoid. When ideal conditions obtain, the State normal school will provide teachers for all grades of city schools as well as for rural schools. Indeed, in most States the just indictment can be brought against most of the State normals that they are neglecting their richest opportunity, which is to train teachers for the rural schools, and are now passing their product into the village and city schools. In many States, and particularly in the Southern States, the rural school pupils constitute from one-half to four-fifths and more of the total school census. In Kentucky, the rural school census is eighty-seven per cent of the total school census. Therefore it seems obvious that the State normal schools in every State should first address themselves to the needs of the rural schools. Complaint of their not doing so has recently been made by several State Superintendents.

One or more State teachers' training schools in each State — one if one is sufficient, more if one is not — should be set aside for the work of preparing teachers for the rural schools, and in every State there should be, in connection with the State training school for teachers, a factor which is found at present in only three or four States, namely, a rural practice school or a combined practice and model school for the specific training of

rural teachers. It seems incomprehensible that State normal schools have not generally recognized the value and necessity of such a practice school as a part of their equipment. It is strange that a school with such clearly defined duties as a State normal school should on the one hand sell its birthright for a mess of pottage in the shape of conferring academic degrees upon its graduates, and on the other hand fail to use one of its greatest opportunities to vitalize the whole school system of its State by neglecting any element in the training of those teachers that constitute the vast majority of the teaching force of the State. If a State normal school has a fundamental concept of its business, it would seem that the rural practice school would be one of the first things provided for. That such a school has not yet been provided in this State is due to the fact that the State normal schools are not yet a year old, and interest in such matters must be built up before public sentiment would sustain the expenditure of money in support of a rural practice school.

It is strange also that the State normal school authorities everywhere seem to fail to recognize the fact that a training in school organization and administration, a training, in short, in what used to be called "school management," is more essential to success, especially in the rural districts, than any amount of training in methods of teaching. The success of a teacher's work in the multigraded country school depends far more upon his ability to organize the school, to grade it in some fashion, to sustain the interest of his pupils in its work, to correlate the school and the community, and to cultivate school sentiment, than it does upon his ability to use the latest methods of teaching reading or geography. Doubtless the failure of the normal schools to enter and occupy this field, except in a theoretical way, is due to difficulties of a practical sort, but with determination on the part of the school authorities and sustaining sentiment on the part of the community, every practical difficulty could be met.

But in every State at least one of the teachers' training schools should carry the training of teachers still further and should prepare teachers for teaching in secondary schools. I can have no patience with the claim sometimes made that the

normal school should prepare teachers only for elementary schools. To concede for a moment that a man or woman recently graduated from college or university, and only from college or university, is competent to teach in a secondary school without having had the training that a teachers' training school is supposed to give, is to cut away the ground from under the whole teachers' training school idea and to yield its basic principle. Such a concession is based upon a fundamental error which has done more to injure the teacher's profession than any other, namely, the belief that a knowledge of subject matter is all that is needed by anyone who desires to teach a given subject. Anyone who has had his ear close to the educational ground may have heard, for years past, many murmurs, especially from the West, against filling the ranks of secondary teachers with recent college or seminary graduates who have had no special training for their work. People are at last awakening to the fact that it is possible to fire both barrels of a shotgun into a crowd of graduates wearing Bachelors' and even Doctors' gowns and not hit a teacher. The arrangement in Michigan seems to me, at this distance, to be very nearly ideal. There the normal college, which crowns the system of normal schools, prepares teachers for the highest grade of work.

Perhaps the normal school will never come into its own fully until popular sentiment upon school matters rises to a sufficient level to demand that no teacher shall be employed in any grade of public schools who has not had special training for his work. In many of our States such a sentiment is growing, and as a result any teacher who has had even a small amount of work in a normal school has a better chance of finding employment than one who has not. But in no State in the Union has the sentiment yet risen high enough to crystallize into legislation that shall require teachers drawing public money to present evidence of successful training in a professional school for teachers. We have grown so accustomed to the present condition that, unless we sit down and think intently about it in all of its relations, we fail to realize what it must mean for a man or woman who has had no training for the work of teaching to undertake to do it. In the background still stands the very substantial ghost of the

old popular conviction that the teacher is born and not made. Even in Massachusetts, the breeding ground of the normal school idea, only forty-eight per cent of the teachers in the public schools have had their training in normal schools. But, some day, we shall either wipe out our normal schools altogether in this country as things that cause an utterly useless expenditure of the State's money, or we shall require every public school teacher to have had a normal school training. Any middle ground is irrational. We have, in most States, accepted one of these alternatives as it applies to the medical profession, and a man cannot hang out his shingle anywhere and dose the public *ad libitum* without some sort of certificate of training for his business. But in Kentucky and in most other States North and South, anybody can open a school and proceed to malpractice upon the innocents. Of course, the seriousness of the situation is relieved a little by the requirement in every State that a public school teacher shall hold some sort of certificate, but this certificate everywhere means practically nothing more than a fair degree of intelligence and ability to answer a certain percentage of a small number of questions in the subject matter of a few branches of study. It is to be hoped that the day will come, and come quickly, when the educational charlatan will no more be tolerated than the medical charlatan.

And here appears another very important function of the State normal school, and that is the cultivating and uplifting of public sentiment. It is as much the business of the State normal school to educate its public as it is to educate its pupils. Any normal school that contents itself with receiving pupils into its classrooms and carrying them through certain processes fails wretchedly to realize its wider opportunity of projecting itself and its influence into the community outside of its schoolrooms. The faculty of a State normal school should constitute a trustworthy body of authority upon educational matters both within and without the State. It should note the state of the schools, the conditions of the teachers, the state of intelligence throughout its territory. The school should be a clearing house for every educational movement in its State or in its portion of the State. It should maintain a bureau of information to which

any citizen of the State might apply for statistics covering any part of the educational field. This work of the State normal school for the State as a whole is fully as important and as valuable as its work in the training of teachers. Without going too much into detail, it might be said by way of specific illustration, that there is no good reason why a State normal school should not issue monthly bulletins containing reports upon educational conditions, upon methods of improving these conditions and calling attention to the best ways in which community and school can coöperate, and there is no reason why State normal schools should not have the franking privilege for these bulletins as the Government Experiment Stations in each State has the franking privilege for agricultural bulletins. The cultivation of brains is as important as the cultivation of corn.

There are signs everywhere that American communities are recognizing the need and value of cultivating hand and eye as well as brain, and the public school curriculum is beginning to include training in the industrial and domestic arts and in agriculture. Keeping in mind also that the State normal school should provide in its course of study for the training of its pupils to teach whatever is to be taught in the public schools, teachers' schools everywhere should be now training men and women to teach these subjects in the public schools in country as well as city. If, for example, the State normal schools of Kentucky could train teachers who would go into the rural communities of the State and teach boys and girls, and through them their parents, how to diversify crops, how to make each cultivated tract double its yield, how to use to the most economical advantage the material sources of income which are to be found at their doors, how to cook wholesomely, they would be rendering the State a far greater service than they could possibly render by training teachers to teach history and grammar, important as that is. It is vastly comforting to note the rapid growth of a sentiment of this sort as evidenced by the introduction the other day into the Senate of a bill by Senator McCreary of Kentucky, providing for liberal Federal appropriations for the teaching of agriculture and the mechanic arts in State normal schools. There should be instant action upon the part of every

lover of his country and community to secure the prompt consideration and passage of this measure. I believe public sentiment has been ready for the teaching of agriculture and the industrial and domestic arts in Kentucky schools for some time, but there have been no teachers for this work. It is the business of the State normal, if properly supported, to furnish these teachers.

To sum up, then, the State normal school stands to one side of the educational ladder and should prepare teachers for every rung of the ascent, with the possible exception of the highest, that is, for the university. A State normal school that does its full duty will set itself first to the improvement not only of rural school teachers, but of the rural schools and the communities that surround them. It will not stop with these, but will prepare teachers for the secondary schools, whether rural, high schools or urban high schools, at least outside the larger cities. It will teach in its classroom, in its laboratories, in its workshops, and in its fields, every subject for which an enlightened public sentiment demands a place in the curriculum of the public school, and it will further set itself unceasingly to the task of raising the level of public intelligence upon all school questions and of quickening the public conscience to a demand for the best opportunities for the development of the richest asset of the State — its children.

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FIRST PAN-AMERICAN CONGRESS

The Commissioner of Education has received from the organizing committee of the First Pan-American Congress at Santiago, Chile, the following announcement, with the request that measures be taken to give it due publicity.

"The organizing committee of the Fourth Scientific (First Pan-American) Congress, took into consideration, in one of its last sessions, the requests which various distinguished Americans have made that the date of opening the Congress might be postponed to a later date than December 1, 1908, which was announced as the time of opening in the official communication previously sent you.

"The objection to opening the Congress on December 1 came principally from teachers in the different American countries who are attending to their scholastic duties at that time.

"Under the circumstances and in order that the attendance of foreign delegates and members may be as large as possible, the organizing committee has decided to postpone the date of opening of the Congress to December 25, 1908. The closing exercises will take place January 5, 1909."

BOOK REVIEWS

HOW TO LOOK AT PICTURES. By Robert Clermont Witt, M.A. New York and London: G. P. Putnam's Sons. $1.50 net.

The author of this new and valuable book on the study of art begins his work by drawing an excellent picture of a character well known to us all. He says: "Among the most pathetic figures in the world must be counted the men and women who may be seen in any picture gallery slowly circumambulating the four walls with eyes fixed upon catalogue or guide book, only looking up at intervals to insure that they are standing before the right picture. All unknowing they falter on, looking at famous pictures without seeing them, conscious that some wonderful power lies hidden there, but without the charmed word to release it. They feel sure that they should be interested: at the same time they know they are bored. They do indeed honor the names of the great masters upon the picture frames, but it is for the most part undiscriminating and unreasoning hero worship. They are lost in a strange world."

It is with the purpose of leading some of these well-meaning seekers after light out of the gloom and obscurity in which they dwell, that the author has written this very entertaining book with the simple and descriptive title, "How to Look at Pictures." Not that it aims to make of the inexperienced observer a competent art critic in the space of the few hours consumed in reading this book, for there are no set rules or formulæ which will make one an expert in the art of seeing pictures; but it is rather with the intention of pointing out to the reader some of the points of view which naturally occur to the spectator who stands before a great picture. And this it does with a great deal of success.

Among the subjects treated are: The Personal Point of View, the Influence of Race and Country, Schools of Painting, Landscape, Genre, Drawing, Colour, Light and Shade, Composition, Treatment, Methods and Materials, etc. The typographical appearance is excellent and the illustrations are many and well chosen.

A COURSE IN NARRATIVE WRITING. By Gertrude Buck, Ph.D., and Elizabeth Woodridge Morris, Ph.D. Pp. 200. New York: Henry Holt & Co. 80 cents net.

It is in view of the untrained student's inability to discover and develop story material in the earlier stages of its organization that considerable stress has been laid in this book on the finding of suitable matter and becoming thoroughly acquainted with it, the fixing of a point of view from which the story is to be told, the marking of terminal points and the choice of essential scenes between these points.

Narrative writing has been treated in this volume primarily and almost exclusively from the point of view of structure. Since the essential outlines of narrative structure can be most easily studies in a form less highly organized and condensed than the modern short story, six larger pieces of narrative are used for comparative analysis at the outset and for reference throughout the course. These narratives, namely, "Robinson Crusoe," The "Vicar of Wakefield," "Pride and Prejudice," "The Mill on the Floss," "Treasure Island," and "The Rise of Silas Lapland," have been chosen primarily as representing different but always sound and careful methods of work, secondarily for the probable familiarity of most students in the college or the secondary school with all except perhaps the last named.

SCHOOL REPORTS AND SCHOOL EFFICIENCY. By Davis S. Snedden, Ph.D., Teachers' College, New York, and William H. Allen, Ph.D., late Secretary of the Committee on Physical Welfare of School Children. This book will be sent postpaid, on receipt of $1.50, sent to R. S. Minturn, 105 East Twenty-second Street, New York City, Treasurer of the Committee on Physical Welfare of School Children.

This book, though by specialists, is popular in form, designed for teachers, superintendents, social workers, parents, taxpayers. It is an outgrowth of the work of the New York Committee on Physical Welfare of School Children, and is commended to all who are interested in trying to measure the scope, outlay and results of American public education. It includes the examination of the reports of 100 cities with a view to indicating in what respects they actually aid in school economy and adminis-

tration. Useful statistical devices are fully illustrated by sample tables which show how any city might prepare an adequate report on the cost, work and results of the public school system. The importance of educational records is clearly indicated by the fact that from one-fourth to one-half of all money spent in city administration goes to the support of the schools.

The last chapter is a suggestive examination of the annual report of the Superintendent of Schools of the City of New York, which maintains not only the most expensive and elaborate educational system of any city in the world, but the system which is most richly illustrative of educational problems and devices for their solution. Some of the important questions answered by the book are: What facts should a school superintendent know in order to improve his system? What facts should boards of education demand of superintendents in order to judge of their competence? What facts should the public demand of boards and superintendents in order to know whether the school system which their taxes support is such as a modern community has a right to demand? Having been ascertained, how should these facts be presented to serve the purpose of publicity and of constructive administration most effectively.

CLASSROOM MANAGEMENT. By William Chandler Bagley, Superintendent of the Training Department, Oswego (New York) State Normal and Training School. 322 pages. New York: The Macmillan Company.

This book is intended primarily for students of education in universities, training schools, and normal schools, who are preparing for classroom teaching, especially in the elementary grades. It aims, first, to furnish the prospective teacher with a compendium of precepts that will aid him in the mastery of technique; secondly, to interpret these precepts in the light of accepted psychological principles; and, thirdly, to unite both precepts and principles into a coherent and fairly comprehensive system.

The data have been gathered from four sources: first and chiefly from observing the work of efficient and successful class-

room teachers; secondly, from text-books and treatises upon the subject of school management and classroom practice, numerous references to which will be found in the footnotes and at the close of the chapters; thirdly, from the writer's own experience; and fourthly, from general psychologial principles. Data of the last named class have in every case been subjected to actual test before being included in this volume. The writer is convinced that a successful *science* of education can never be produced by working backward from highly wrought theory to concrete practice. This procedure is a survival of the deductive habit of mind which science has long since discarded as totally inadequate to the discovery of truth. Valid principles of teaching can be derived only from observation and induction based upon successful school practice. The expert teacher learns through a selective process of trial and error how most effectively to deal with the pupils under his care. If a given educational practice is effective, there must be back of it somewhere a valid principle. It has been the writer's attempt, first to find the successful practice, and then to discover the principle that governs it.

BROWNING'S ITALY. By Helen A Clarke. 382 pages. New York: The Baker & Taylor Co.

Lovers of Browning will find Miss Clarke's book a new literary treat, for it is thoroughly interesting and artistic.

In the chapter entitled "The Dawn of the Renaissance," the author has given Browning's conception and rendering of Sordello, who grew from an individualist bent upon obtaining power and glory for himself, to a socialist type, in its broad sense, desirous of helping the masses of the people to rise to better conditions.

The second chapter, "Glimpses of Political Life," deals with Browning's dramas, and the author says: "In four out of the seven dramas written by Browning, he has given through the optic glass of his own vision a characteristic view of some phase of political life in Italy," and uses history to interpret these dramas, showing how Browning came to write them.

"The Italian Scholar" is an interesting chapter in which the author says: "Although there are but two of Browning's poems that touch directly the purely scholarly aspects of Italian culture in the Renaissance . . . . in 'Pietro of Abano,' science and the philosophical side of Greek learning figure, and in 'The Grammarian's Funeral,' the enthusiasm for language study, particularly that of Greek, is shown." She gives the history of "Pietro of Abano" as it exists in the legend and points out how Browning obtained his ideas for the poem. Likewise she tells why he wrote "The Grammarian's Funeral," and on what facts it was based.

"The Artist and His Art" is of itself a valuable chapter, and would make an excellent little book. It goes into the history of the artists of whom Browning wrote and demonstrates wherein he interpreted the characteristics of the various schools and individual artists in his poems.

The fourth and last chapter, "Pictures of Social Life," shows in what ways Browning has given pictures of social conditions in Italy from the sixteenth century to near the end of the eighteenth century, in "My Last Duchess," "Cenciaja," "In a Gondola," and "The Ring and the Book."

The paper used in this volume, the illustrations, binding, and the author's style have all combined to make the work one of art.

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LITERATURE IN THE ELEMENTARY SCHOOL. By Porter Lander MacClintock, A.M. A text for use in normal schools. 305 pages. Chicago: The University of Chicago Press. $1.00.

This book had its origin in several years of experience and experiment in teaching classes in literature in the Laboratory School of the University of Chicago, when that fruitful venture in education was being conducted by Professor John Dewey; in many years of private reading with children; and in many years of lecturing to teachers of children.

Some of the contents are: The Services We May Expect Literature to Render in the Education of Children; the Kinds of Literature and the Elements of Literature Serviceable in the

Elementary School; The Choice of Stories; Folk-Tale and Fairy-Story; Myth as Literature; Hero-Tales and Romances; Realistic Stories; Nature and Animal Stories; Poetry; Drama; the Presentation of the Literature; Literature out of School and Reading Other than Literature.

A list of selections is given as suggestions for each year's course, with the attempt to put into each year such things as will delight and train a child of that age in literary ways, and to use things every teacher knows or may very easily find, and to associate things that harmonize in spirit.

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PRACTICE BOOK IN ENGLISH COMPOSITION. By Alfred M. Hitchcock. 223 pages. New York: Henry Holt & Co. 80 cents net.

Present day conditions seem to call for a very plain, practical text-book, brief yet sufficiently varied in contents to provide both oral work and written work, home tasks and unprepared classroom drill; a course so contrived that definite, desirable results may be obtained without overburdening the teacher.

The "Practice Book" attempts to meet these conditions. It is not a rhetoric nor a complete manual of composition. Instead of elaborate statements of theories, principles and rules, it contains merely a few simple suggestions slipped in here and there informally — cautions against common errors, and hints in regard to how compositions may be made effective.

No small part of the book is made up of exercises in spelling, punctuation, and sentence-structure. Part I calls for short composition, oral and written; Part II takes up an entirely different kind of work, training in mechanical accuracy.

LEADING MAGAZINE ARTICLES OF THE MONTH

THE ATLANTIC MONTHLY

December— The Future of Our Navigable Waters, Mathews. Rose MacLeod, Brown. Wheat, the Wizard of the North, Cameron. When Lalla Rookh Was Young, Repplier. The Ethics of Speculation, Dole. The Children's Educational Theatre, Herts. Recent Shakespearean Literature, Neilson. The Year in Germany, Dreher. The Year on Parnassus, Greenslet.

January— Justice to the Corporations, Higginson. Rose MacLeod Brown. Industrial Education, Hanus. Confessions of a Railroad Signalman, Fagan. The Industry of Music-Making, Walter. The World's Wealth in Negotiable Securities, Conant. The Peace-Teaching of History, Larned. A New Life of Goethe, Gauss.

MUNICIPAL JOURNAL

December—Street Cleaning in Boston. Paving and Trench Excavations. Delays in Awarding Contracts. Hand Patrol and Machine Sweeping. A Worcester Convenience Station. Pipe Subways Under Sidewalks. Roadway and Sidewalk Widths. Sanitary Protection of a Watershed. Sewer Stoppage by Tree Roots. Sewers, Flies and Typhoid Fever. Duplicate City Governments at Texarkana. Flies and Typhoid Fever. Municipal Work for Unemployed.

WAVERLEY MAGAZINE

December—The Discoverers, Misner. The Specters That Haunted John Drew, Beverly. The Ambulance Chaser, Keator. Captain Tuttle's Diamonds, Goodwin. The Kidnapping of the Bride, Wetherbee. Mrs. Sharp, a Character Study, Wood.

SUBURBAN LIFE

January—The Suburban Library. Was I Wise to Move into the Suburbs? Keeping Fancy Poultry as a Recreation, Robinson. What Kind of a House Shall I Build in the Spring? Choosing the Wall Paper for a Suburban Home, Goodwin. The Common-Sense Care of Dogs, Newnham-Davis. The Selection of a Piano, Hart. Some Simple Methods of Ventilation, Newnham-Davis. How to Make the Best Use of Seed Catalogues, Whitcomb.

NEW ENGLAND MAGAZINE

December—Massachusetts in an Era of Industrial Prosperity and Political Buncombe, Putnam. The Conspirators: a Christmas Play, Barbour. The Reassembling of Congress at Washington, Barry. Patricia's Christmas Family, Elliott. A Year of Fenimore Cooper's Life, Sawyer.

NATIONAL MAGAZINE

December—Affairs at Washington, Chappel. The Smoky God, Emerson. Adversity. Why the Fleet Will Round the Horn, O'Laughlin. In the Service of Uncle Sam, Gauss. Corm Bradley's Awakening, Roe.

MODERN LANGUAGE NOTES

December—Origin of the Vow Motif in the *White Wolf*, Johnston. A "Local Hit," Durand. The Lady in the Garden, Hart. A Latin-Portuguese Play, FitzGerald. The Sator-Acrostic, McBryde.

THE MISSIONARY REVIEW OF THE WORLD

January—A New World-Consciousness, Dennis. Persia in Transition, Larabee. The National Awakening in India, Banninga. The Present Crisis in the East, Smith. A Missionary Picnic in the Netherlands, Riepma.

THE TAYLOR-TROTWOOD MAGAZINE

December—The Indian Question in Jackson's Time and Since, Colyar. Men of Affairs. Some Notes on Andrew Johnson, Reeves. Some Southern Women and What They Are Doing, Banks.

THE FORUM

October-December—American Politics, West. Foreign Affairs, Low. Finance, Noyes. A Few French Books of To-day, Trent. Educational Outlook, Lang. Applied Science, Suplee. The Relation of Education to Good Government, Sternburg. The University President, Stearns. The Birth of the New Nippon, Kinnosuke. The New Manchuria, Kawakami.

THE METAPHYSICAL MAGAZINE

December—The Mysteries, Wilder. Evolution from Being, Clark. Christian Science versus Paganism, Scott. Meditations, Sherman.

January—The Metaphysics of Business, Cumming. The Electrical Age, Richmond. The Mystery of Lost Ford Farm, Keaton. A Meditation on Physical Immortality, Wattles.

THE NINETEENTH CENTURY

December—Modernism and the Papal Encyclical, Moyes. Criminals and Crime, Wills. Revival of the Folk-Drama, Maxwell. The Claims of Sentiment upon Indian Policy, Fuller. The Church and the Law, Russell. The Opium Edict and Alcohol in China, Giles.

THE READER

December—Fowler Brunton, Attorney-at-Law, Whitlock. The Baby and the Pirates, Lauer. The Man Who Arrives, Birchall. The Coast of Chance, Chamberlain. The Tariff: Help or Hindrance, Bryan and Beveridge.

THE CHAUTAUQUAN

December—English Critics on America. Formative Influences in American Painting. Our "Backyard Critic," the Immigrant. Louis Agassiz. Christmas Greeting from Chancellor Vincent.

THE AMERICAN REVIEW OF REVIEWS

January—The Progress of the World. Currency Reform: A Central Bank, Ireton. Oscar II, a Democratic Monarch. A Nobel Prize for American Science, Wade. William James: Man and Thinker, Bjorkman. Electricity's Latest Triumphs. The Newspaper and the Forest, Rossiter. The Gold Flood and its Problems, Norton.

AMERICAN CHEMICAL JOURNAL

December—Researches on Pyrimidines, Johnson and Heyl. On Amalgams, Smith. Dissociation as Measured by the Freezing Point Lowering and by Conductivity, Jones and Pearce. Studies in Catalysis, Stieglitz. Studies in Bromination, Acree, Johnson and Nirdlinger.

JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS

December—Psychology: What is it About? Calkins. Realism and the Physical World, McGilvary. Reviews and Abstracts of Literature. Dreyfus's *Die Melancholie*, Wells. Journals and New Books.

THE LUMBERMAN

December 15—Keynotes and Panics. Readjustments Make Improvement Slow, but it is Sure. The Time to Plan and Systematize Waterway Improvements. Yellow Pine Rates to Colorado Advanced. The Law and the Mississippi-Louisiana Association. Business Progress and Mistakes. Being a Specialist.

January 1—The Annual Business in Slack Cooperage. Sap Rot and Other Diseases of Red Gum. The Utilization of Wood Waste by Distillation. The Hardwood Trade Outlook. Ruling of the Interstate Commission on Freight Rate Claims. The Parcels Post System in Relation to the Mail Order House. Our "Wood" Relations with Canada.

LIPPINCOTT'S MAGAZINE

January—The Duchess of Dreams, Macvane. Random Philosophy, Rees. Hypochrondria, Walton. Nursing an Oil Deal, Becker. The Fortunes of Splinter, Henderson.

SCRIBNER'S MAGAZINE

January—Irrigation, Pepper. The Trail of the Lonesome Pine, Fox. In the Louisiana Canebrakes, Roosevelt. Hawthorne, Wharton. A Defense of Prejudice, Hibben.

THE WORLD TO-DAY

December—Women Who Are National Types, Austrian. Our Colonial Empire, the Unknown Philippines, Wright. Has America an American Art? Dickerson. Charity on a Business Basis, Claudy.

POPULAR ASTRONOMY

December—An Astronomical Theory of the Molecule, Corrigan. Mathematics Needed for the Study of Practical Astronomy, Payne. The Red Spot on Jupiter, Denning. The Solar Eclipse of January 3, 1908, Rigge. On a New Means of Sharpening Celestial Photographic Images Applied with Success to Mars, Lowell.

POLITICAL SCIENCE QUARTERLY

October, November and December—Railroad Valuation, Ripley. The Legal Status of Trade Unions, Seager. The Constitutionality of Civil Service Laws, Harper. The Office of Mayor in France, Munro. The Roman Gens, Botsford. Current Political Theory, Dunning.

POPULAR SCIENCE MONTHLY

December—The Place of Linnæus in the History of Science, Lovejoy. The Problen of Age, Growth and Death, Minot. The Radio-activity of Ordinary Substances, Strong. The Influence of Diet on Endurance and General Efficiency, Chittenden. Jean Louis Rudolph Agassiz, Morse. The Origin of Slavery Among Ants, Wheeler. A Trip Around Iceland, Gratacap.

January—The Institute of France and Other Learned Scientific Societies, Williams. What is Matter, Mezes. Farm Tenancy, a Problem in American Agriculture, Price. Some Recent Transmutations, Baskerville. How Shall We Improve Our Race, Michaud.

THE BUSINESS WORLD

December—Minneapolis as It is To-day. The late Henry O. Havemeyer. The Merchants' Association of New York.

THE PEDAGOGICAL SEMINARY

December—A Study of Vocabularies, Doran. The Cat, a Neglected Factor in Sanitary Science, Osborne. Mental Depression in Young Women and Children, Hancock. Educational Aspects of Lancashire and Yorkshire, Prowse. Education in Interest: A Study in Experimental Psychology, Guillet. An Unstaked Claim in Psychology, Marsh. Reform of Juvenile Criminals, McDonald. A Primary School in Wales, O'Hara. The Second International Congress on School Hygiene, McKeag. The Educational Value of Humor, Colvin.

THE SEWANEE REVIEW

October, November and December—The Fascination of Pessimism, Block. The Romans and the Ocean, Bryan, Livy, Steele. Literature and the Literary Product, Carpenter. The Tale of Three Cities, Means. Womanly Education for Woman, McBryde. Vicksburg, and After, Sabin. The Question of Civic Improvement, Caparn.

COSMOPOLITAN MAGAZINE

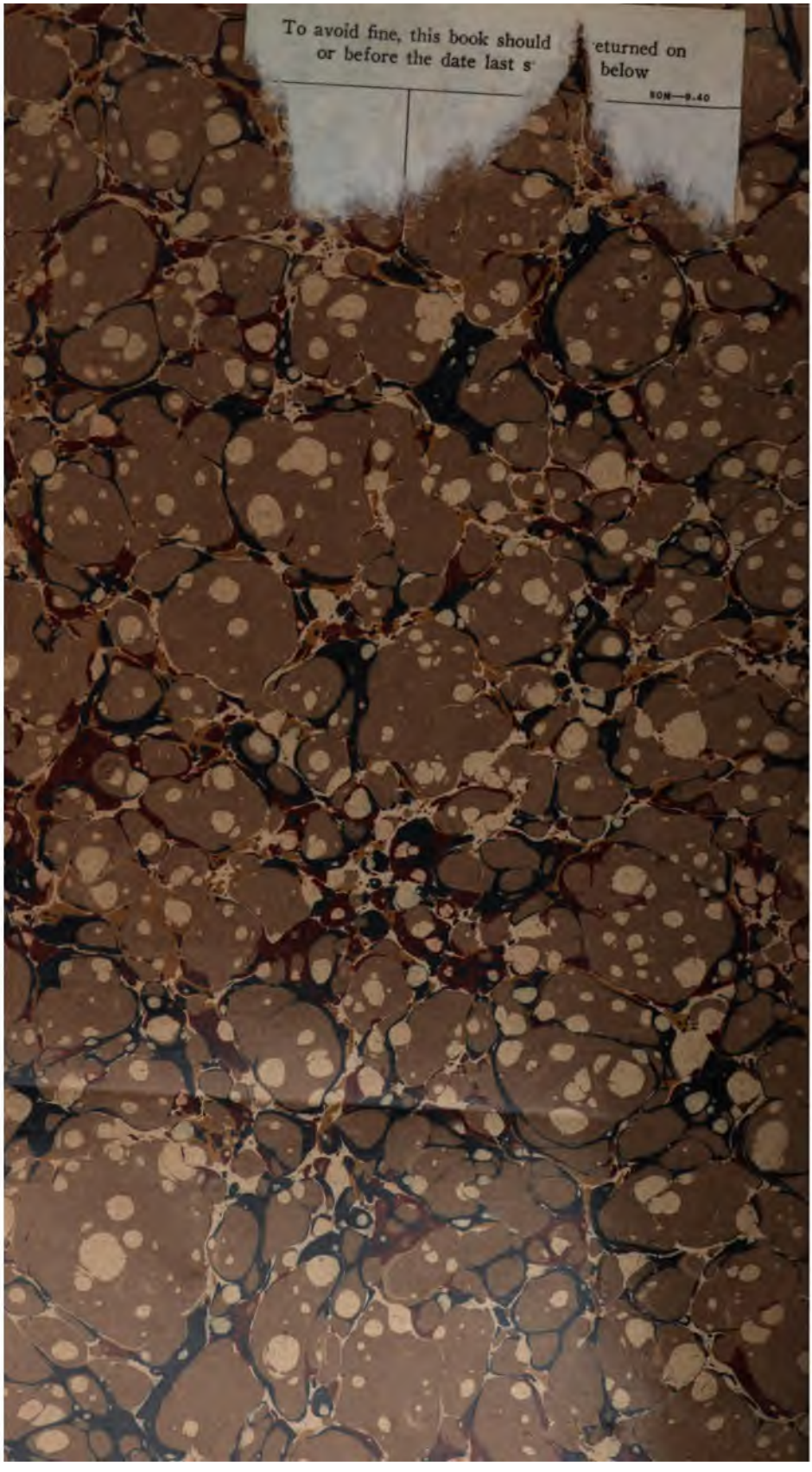
December—The $5,000,000 Art Collection, Clarke. The Long Arm of Mannister, Oppenheim. At the Throat of the Republic, Russell. Some Delusions About Dress, Hutchinson. Hoboes That Pass in the Night, London. An Insurrection of the Peasantry, Bierce.

January—The Black Hundred of Russia, Long. Impressions of My American Visit, Bishop of London. The Long Arm of Mannister, Oppenheim. At the Throat of the Republic, Russell. A Wonderful New Singer, Armstrong. Steam Turbines and the Future, Kaempffert. A Defense of the Actor, Dale.

ECCLESIASTICAL REVIEW

December—A Plea for Congregational Singing, Petter. Ecclesiastical Control of Religious Communities under Simple Vows, Heuser. Parental Consanguinity and Defective Children, Walsh.

January—Modernism in the Church in America. Ritualists and "Catholic Consent," Russell. DeRance and the Trappist Reform, O'Connor. An Historic Church in Our Southland, Hannon. Carols and Carol Singing, Feasey, Recent Biblical Literature and Decisions of the Commission.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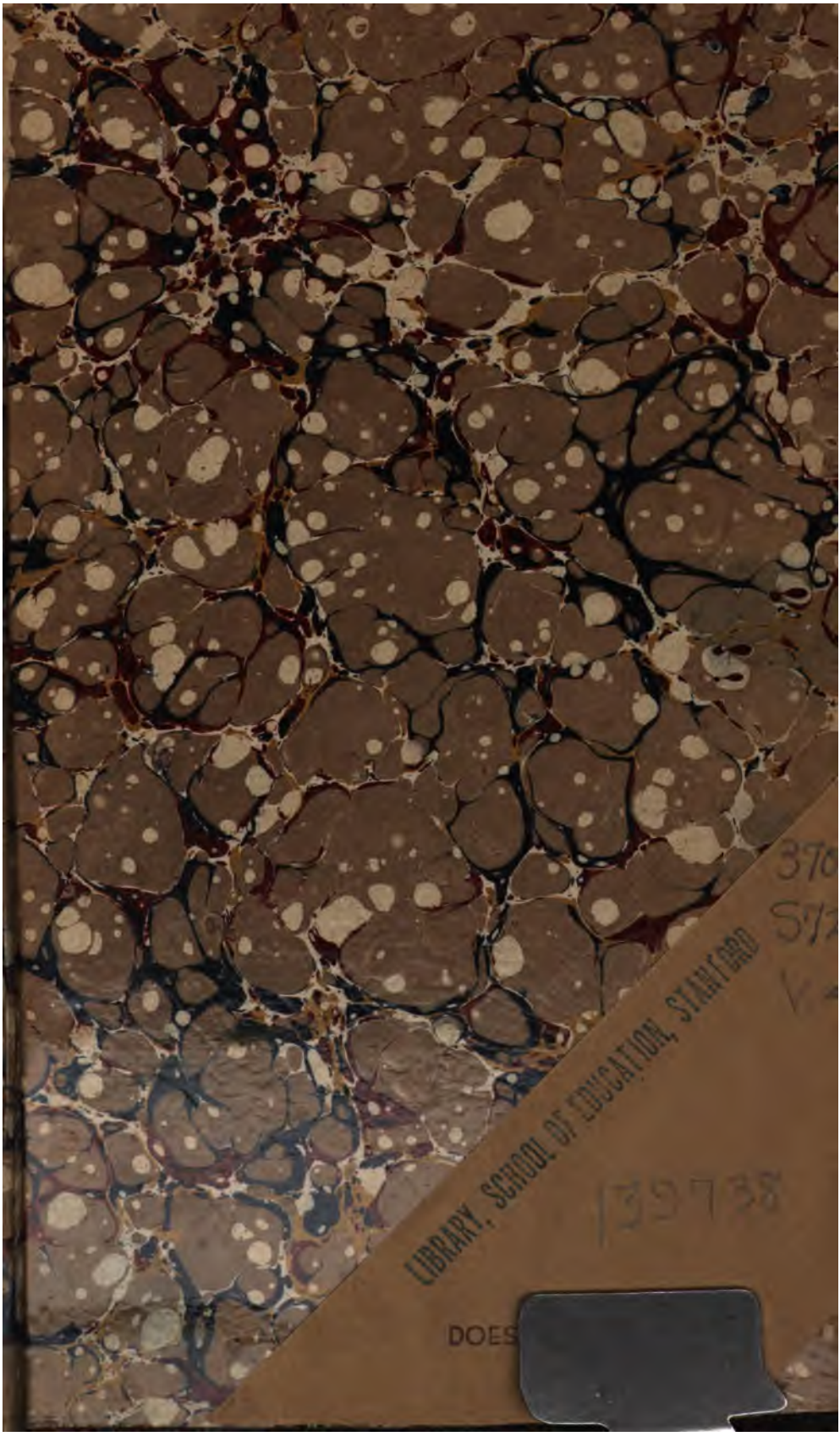
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